The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The MINING JOURNAL is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

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MR. JAMES H. CROFTS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER.
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.
ESTABLISHED 1842.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British and Foreign), Consols, Banks, Bonds (Foreign and Colonial), Railways, Miscellaneous, Insurance, Assurance, Telegraph, Shipping, Canal, Gas, Water, and Dock Shares.

BUSINESS negociated in Stocks and Shares not having a general market value.

BUSINESS in COLLIERY and IRON Shares, and in the principal WAGON and MANUFACTURING COMPANIES of the NORTH of ENGLAND and SCOTLAND.

BUSINESS in all the principal COTTON SPINNING Shares.

Mr. J. H. CROFTS, having now established CORRESPONDING AGENCIES in all the CHIEF TOWNS of the United Kingdom, is prepared to deal in the various LOCAL Stocks and Shares at close market prices.

ACCOUNTS OPENED FOR THE FORTNIGHTLY SETTLEMENT.

A Daily Price List, issued at 5 P.M., giving latest Quotations up to close of Market. Also, on the 1st of every month a List of all Securities currently dealt in upon the Mining and Stock Exchanges, with latest prices, current dividends, rate of interest yielded at market price, &c., and every Friday a general List containing closing prices of the week.

MINES INSPECTED.

BANKERS: CITY BANK, LONDON; SOUTH CORNWALL BANK, ST. AUSTELL.

SPECIAL DEALINGS in the following, or part:—

100 Aberdaunant.	10 G. Laxey, £19.	50 Port Phillip, 11s.
15 Bodidris.	10 Hultafall, £3¼.	100 Rookhope, 15s.
5 Chapel House, £3 1s 3	150 Javali, 8s. 9d.	20 Richmond, £9⅝.
150 Chontales, 14s.	25 Leadhills, £3¼.	15 Roman Grav., £7¾.
30 Devon Con., £2¾.	40 Llanrwst.	40 St. Harmon, 35s.
7 D'Eresby Mountain.	50 New Quebrada, £2.	10 Tankerville, £3¾.
30 D'Eresby Consols.	50 N. Zea. Kapan., 32s 6d	15 Van, £19.
5 East Van, £4⅛.	50 North Laxey, 3s.	50 Van Consols, 9s.
50 Flagstaff, 12s. 6d.	35 Penstruthal, 5s.	30 W. Tankerville, 5s.
20 Glenroy, 14s.	125 Pestarena, 4s. 6d.	20 ditto Preference, 20s.
	45 Parys Moun., 8s. 6d.	

, SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.

FOREIGN BONDS—ARGENTINE—EGYPTIAN—RUSSIAN, TURKISH, SPANISH, PERU, &c.
SPECIAL BUSINESS in the above, and Fortnighty Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

RAILWAYS—HOME AND FOREIGN.—SPECIAL BUSINESS in the above, and Fortnightly Accounts opened on receipt of the usual cover.
JAMES H CROFTS, 1, FINCH LANE, LONDON.

MISCELLANEOUS AND TRAMWAY SHARES.—SPECIAL BUSINESS in—

MISCELLANEOUS.	CHEMICAL.	TRAMWAYS.
Alhambra Palace.	Lawes.	Argentine.
Fore street Warehouse.	Langdale.	Bristol.
Halcomb Sack.	Newcastle.	Edinburgh.
Positive Assurance,		Glasgow.
And other Shares.	TELEGRAPHS.	London.
AQUARIUM.	Direct.	North Metropolitan.
Brighton.	Globe.	Tramways Union.
Royal (Westminster).	Telegraph Construction	And others.
Yarmouth.	W. India and Panama.	

BUSINESS TRANSACTED in all MISCELLANEOUS SHARES (of whatever description) having LONDON or COUNTRY MARKET VALUES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.
ESTABLISHED 1842.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER, AND MINING SHARE DEALER,
44, THREADNEEDLE STREET, LONDON, E.C.
ESTABLISHED 1867.

BUSINESS transacted in STOCK EXCHANGE SECURITIES and MISCELLANEOUS SHARES of every description.
RAILWAYS, BANKS, FOREIGN and COLONIAL BONDS, TRAMWAYS, TELEGRAPHS, and all the LEADING INVESTMENTS.
Accounts opened for the Fortnightly Settlement.
A Stock and Share List free on application.

MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

100 Aberdaunant.	40 Flagstaff, 12s.	50 Pandora. 10s. 6d.
30 Blue Tent, £2½.	5 Great Laxey, £19¼.	50 Parys Mount., 8s.
50 Bodidris.	100 Glenroy, 12s. 6d.	100 Penstruthal, 4s. 9d.
70 Chontales, 13s.	20 Grogvinion.	20 Pateley Bridge.
100 Cedar Creek, 4s. 6d.	50 Hultafall.	50 Port Phillip, 8s. 6d.
25 Colorado, £4 13s. 6d.	70 Javali, 8s. 9d.	70 Rookhope, 13s. 6d.
50 Don Pedro, 8s. 6d.	30 Kapanga, 32s.	15 Roman Grav., £7⅝.
30 Devon Cons., £2¾.	25 Leadhills, £3¼.	10 Richmond, £9½.
60 Derwent, 25s. 6d.	50 Last Chance, 21s. 6d.	10 South Frances, £4.
5 D'Eresby Mountain.	15 Llanrwst.	15 Tankerville, £3 17s 6d
20 East Caradon, 7s.	40 Marke Valley, 14s. 6d.	5 Van, £19.
15 Eberhardt, £6⅛.	30 Mellanear, £3 18s. 9d.	25 Wheal Grenville.
10 East Van, £4⅝.	10 Minera.	50 W. Godolphin, 15s.
25 Frontino, 41s.	25 New Quebrada, 41s.	

DEVONPORT AND TIVERTON BREWERY COMPANY.—FOR SALE, 35 Shares (£5 each, fully paid), at £3 15s. net, for cash. Last dividend at the rate of 7 per cent. per annum.

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.

WILLIAM HENRY BUMPUS, SWORN BROKER.
Offices: 44, Threadneedle Street, London, E.C.
BANKERS—The NATIONAL PROVINCIAL BANK OF ENGLAND, E.C.

MR. THOMAS THOMPSON, JUN., STOCK BROKER,
1, PALMERSTON BUILDINGS, BISHOPSGATE STREET, LONDON, E.C.

MR. THOMPSON transacts business in every species of Stock Exchange and Mining Securities.

MR. THOMPSON affords reliable information to investors, and can give, when desired, a list of first-class Stocks and Shares, yielding 4 to 10 per cent. dividends upon present prices.—MR. THOMPSON'S weekly Circular may be had on application.

WILLIAM GABBOTT, STOCK AND SHARE DEALER,
8, DRAPER'S GARDENS, THROGMORTON STREET, LONDON, E.C.

MR. W. MARLBOROUGH, STOCK AND SHARE DEALER,
29, BISHOPSGATE STREET, LONDON, E.C. (Established 22 Years),
can sell the following SHARES, at prices annexed:—

40 Aberdaunant.	50 Exchequer, 2s. 6d.	12 Plynlimmon, 3s.
40 Bodidris, 25s.	10 E. Caradon, 6s.	10 Richmond, £9 8s. 9d.
20 Birdseye, 16s. 3d.	20 Frontino, £1 17s. 6d.	50 Rookhope, 12s.
20 Blaen Caelan, £4 2s 6d	100 Flagstaff, 11s. 9d.	100 Rossa Grande, 2s. 3d.
30 Cambrian, £2 13s. 9d.	40 Glenroy, 12s. 6d.	10 Roman Grav., £7¾.
80 Chontales, 13s.	20 Gorsedd & Mer. £4 1 3	10 Tankerville, £3 10s.
10 Chicago, 17s. 6d.	25 Hultafall, £3 10s.	40 Tecoma, 4s.
30 Colorado, £4 8s. 9d.	25 Last Chance. £1 2s. 6d	30 Tyn-y-Fron.
25 Court Grange, 20s.	20 Linares, £5⅛.	4 Van, £18¾.
50 Don Pedro, 9s.	25 Morfadu, 12s. 6d.	15 West Chiverton, £7.
10 D'Eresby Con., £8¾.	25 N. Zea. Kap., £1 10s. 6	10 Wh. Grenville, £2⅛.
2 D'Eresby Moun., £80.	20 Pandora, 12s. 6d.	10 Wh. Kitty, 29s.
20 East Lovell, 6s. 3d.	40 Parys Mountain, 8s.	20 W. Wye Valley, £2⅜.
15 East Van, £4⅛.	20 Pateley Bridge, £4.	25 W. Tankerville, 6s. 3d
10 Eberhardt, £6 1s. 3d.	75 Penstruthal, 5s.	100 Yorke Peninsula, 5s.

Shares bought and sold at net prices. Telegrams promptly attended to.
Specially Recommended for an early rise in price:—Gorsedd and Merilyn, Bodidris, Tyn-y-Fron, Hultafall, Pandora, and D'Eresby Mountain.

MESSRS. PETER WATSON AND CO.,
54, OLD BROAD STREET, LONDON, E.C.
BUSINESS in STOCKS and SHARES.
RAILWAYS, BANKS, DIVIDEND LEAD MINES, &c.
BANKERS: The ALLIANCE BANK (Limited).
A CIRCULAR published MONTHLY. Single copy, 6d.; annually, 5s.

MR. ALFRED E. COOKE,
STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON, E.C.
ESTABLISHED 1853.

SPECIAL NOTICE.—MR. COOKE being on a TOUR OF INSPECTION, the "INVESTORS' GAZETTE" will not be published THIS WEEK.
The next number will appear, as usual, on FRIDAY NEXT.
Single number, three stamps; 2s. 6d. quarterly.
ALFRED E. COOKE, STOCK AND SHARE DEALER,
76, OLD BROAD STREET, LONDON.
Established 1853.

MR. JAMES STOCKER, STOCKBROKER,
2, CROWN COURT, THREADNEEDLE STREET, LONDON, E.C.
MR. STOCKER Transacts Business in all Stock Exchange Securities.
[Established 1845.]

BUSINESS in the FOLLOWING SHARES:—

Aberllyn.	Roman Grav., £7 14s.	
Aberdaunant,	Rookhope, 12s. 6d.	Colorado, £4½.
Bodidris.	South D'Eresby.	Chontales, 13s.
Chapel House, £3.	Tankerville, £3¾.	Don Pedro, 11s. 9d.
D'Eresby Mountain.	Van, £18½.	Eberhardt, £6.
East Van, £4½.	United Mexican, £3¾.	Flagstaff, 10s. 9d.
Grogwinion.	Wye Valley, 31s. 6d.	Frontino, 40s.
Glenroy, 12s. 6d.	West Wye Valley, £2¾.	Hultafall, £3¾.
Great Laxey, £19.	West Chiverton, £8.	Javali, 8s. 9d.
Leadhills, £3¼.		Last Chance, 22s. 6d.
Llanrwst, 42s. 6d.	General Credit.	N. Zealand Kapanga.
Pandora, 12s.	Hudson's Bay.	Pestarena, 4s. 9d.
Penstruthal, 4s.	India Rubber.	Port Phillip, 11s.
Parys Mountain, 8s.	London Trams.	Richmond, £9¾.
Pateley Bridge.	Royal Aquarium.	

BANKERS: LONDON AND WESTMINSTER.

FERDINAND R. KIRK, STOCKBROKER,
5, BIRCHIN LANE, E.C.

"THE WEEK."—A SEPARATE EDITION from that which appears in the *Mining Journal* is published every Wednesday evening, containing "Notes and Hints on the Stock Markets," with Closing Prices. May be had on application.

FORTNIGHTLY ACCOUNTS.—The principal dealings are now centred in Consols, Turkish Fives, Unified, Spanish, Bolivian, Chatham, Great Eastern, and District. The necessary "cover" may be learnt on application.

FOREIGN RAILWAYS.—Special Business in East Argentine, Mexican, Ottoman, and Varna.

MISCELLANEOUS.—A large business is being done in Government Stock Investment, Railway Share Trust, Odessa Waterworks, Hudson Bay, General Credit, and Royal Aquarium.

COLLIERIES.—The following may always be dealt in at close prices:—Bilson and Crump, Cardiff, Newport Abercarn, and Chapel House.

Bankers: London and Westminster, Lothbury.

MR. T. E. W. THOMAS, SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
Established 1857.

The following are the latest prices at which business could be done. Where the difference between the buying and selling price is wide transactions may be effected at an intermediate price:—

	Buyers.	Sellers.		Buyers.	Sellers.
Aberdaunant	5s.	7s. 6d	New Quebrada	1¾	2
Argentine	5s.	7s. 6d.	New Zealand Kapanga	1⅜	1⅝
Bodidris	£ 1¼	£ 1⅜	North Laxey	2s.	3s.
Colorado	4	4¼	Parys Mountain	7s.	8s.
Chontales	11s.	12s.	Pateley Bridge	3¼	3¾
Clementina	1	1¼	Penstruthal	5s.	6s.
D'Eresby Consols	8	10	Plynlimmon	3s.	4s.
Denbighshire	1¼	1⅜	Richmond	9⅛	9¾
Devon Great Consols	2	2¾	Roman Gravels	7½	8
Don Pedro	7s.	9s.	Rookhope	11s.	12s. 6d
Eberhardt	6	6¼	South Condurrow	11	11⅜
East Caradon	3s.	5s.	Tecoma	2s.	4s.
East Van	4	4¼	Tyn-y-Fron	1¼	1⅜
Flagstaff	7s. 6d	10s.	Tankerville	3⅛	3¾
Frontino	1¾	2	Tincroft	8	9
Glenroy	10s.	12s. 6d.	Van	17⅛	18
Glyn	9s.	11s.	West Chiverton	8	9
Gorsedd and Merilyn	3½	4	West Godolphin (call pd)	12s.6d	15s.
Grogwinion	2¾	2¾	West Seton	7	9
Great Laxey	18½	19	West Wye Valley	2	2⅛
Hultafall	3	3⅛	W. Grenville	2	2¼
Last Chance	1	1⅛	Wye Valley	1¾	1⅞
Leadhills	2½	3	Yorke Peninsula	4s.	5s.
Mellanear	3½	4			

MR. JOHN B. REYNOLDS, STOCK AND SHARE DEALER,
70 AND 71, BISHOPSGATE STREET WITHIN, LONDON, E.C.
Established Twenty Years.
Bankers: London—City Bank.
Cornwall—Messrs. Tweedy, Williams, and Co., Redruth.

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 30, GREAT ST. HELEN'S, LONDON, E.C.
SPECIAL BUSINESS at close prices in East Lovell, East Van, D'Eresby Mountain, Chapel House Colliery, Great Laxey, Minera, Richmond, Bodidris, South Condurrow, South Caradon, West Chiverton, West Tolgus, Blaen Caelan, Gawton, Llanrwst, and Wheal Peevor shares.

MESSRS. EKINS AND CO., STOCK AND SHARE DEALERS,
14, QUEEN VICTORIA STREET, MANSION HOUSE, LONDON.
Bankers: Metropolitan.

SOUTH DE ERESBY MOUNTAIN MINE.

Large numbers of shares in this mine have been absorbed, and with every fresh discovery they will undoubtedly rise in price. The Gorse lode runs direct through the South de Eresby Mountain Mine, and there intersects the Great Penralt and Cwm Lanarch lodes. South de Eresby Mountain Mine is consequently the most valuable sett in the district. Capt. Bennetts' reports, which have appeared in the Journal from time to time, have not been too sanguine.

The well-known mining engineer, Mr. John Hitchins, one of the greatest authorities of the day, speaking of South de Eresby Mountain Mine, observes—"I am fully persuaded the lodes of the d'Eresby Consols and d'Eresby Mountain Mines run into and through your sett. * * * I regard this property as presenting a field for mining operations of more than ordinary character."

For shares in this company apply to Messrs. EKINS and Co., 14, Queen Victoria-street, London, E.C.

MESSRS. JONES AND HOUSTON, 25, CROSBY HALL CHAMBERS, BISHOPSGATE STREET WITHIN, LONDON, E.C.
are doing BUSINESS in the FOLLOWING SHARES:—

100 Aberdaunant, 5s.	100 North Laxey, 2s. 9d.	20 Eberhardt, £6 10s.
50 Argentine, 3s. 6d.	40 Pant-y-Mwyn, £4½.	50 East Van, £4.
50 Bodidris, £1 5s.	100 Parys Mount., 7s.	10 Flagstaff, 12s.
150 Central Van, 15s.	50 Plynlimmon, 3s.	20 Frontino, £1½.
10 Chapel House, £3.	200 Penstruthal, 4s. 3d.	15 Glenroy, 12s.
15 Cardiff & Swan., 21s.	100 South Aurora, 5s.	10 Gorsedd and Merilyn, £3 15s.
10 Colorado, £4⅛.	10 Tankerville, £3 17s. 6d	
5 Cedar Creek (off. w.)	30 Tyn-y-Fron, £1⅛.	5 Gt. Laxey, £18¼.
2 D'Eresby Moun., £80.	10 Wye Valley, 30s.	20 Hultafall, £3¼.
20 D'Eresby Con., £9.	5 West Seton, £11.	30 Leadhills, £3¼.
200 Don Pedro, 8s. 6d.	10 Wheal Newton, £3¾.	5 New Quebrada, £1⅛.

We beg to call the attention of our clients and mining investors generally to the claims of the Pant-y-Mwyn Lead Mine, and might refer them to the reports and correspondence which have appeared weekly in this Journal in reference to its almost unprecedented success. We expect the disclosures at the annual meeting this month will send these shares up with startling rapidity, and strongly recommend the purchase of same.

Bankers: London and Provincial.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MR. ALFRED THOMAS,
MINING AGENT, AND STOCK AND SHARE DEALER.
10, COLEMAN STREET, LONDON, E.C.

"INVESTMENTS AND SPECULATIONS" for 1878,
Price Sixpence.

MR. EDWARD ASHMEAD, 62, CORNHILL, LONDON,
LONDON MINE AGENT, ACCOUNTANT, AND AUDITOR.

ABBOTT AND CO.,
STOCK AND SHARE DEALERS,
12, UNION COURT, OLD BROAD STREET, E.C.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
38, CORNHILL, LONDON.
Railway Stocks Bought or Sold at ¼ per cent. commission, and ⅛ per cent. on Foreign Stocks.
Speculative business transacted in Railway and other Stocks for the fortnightly settlement on receipt of our usual 5 per cent. cover.

MESSRS. OWEN AND CO.,
STOCK AND SHARE BROKERS.
OFFICES: 4, BISHOPSGATE STREET WITHIN, E.C.
Bankers: The National Provincial Bank of England.
Business in every kind of English and Foreign Stocks and Shares at the best market prices for the day; also in TRAMWAY, GAS, WATER, ROLLING STOCK, and INDUSTRIAL COMPANIES SHARES.
Messrs. OWEN and Co. possess great facilities for securing advantageous markets for MINING SHARES, as they have opportunities for obtaining exclusive and reliable information relating to the leading undertakings of this description.
Orders by post or telegram promptly executed.
Office of "Tramways Intelligence," 1878.

MESSRS. ENDEAN AND CO., 85, GRACECHURCH STREET
LONDON, E.C., STOCK AND SHARE DEALERS.
Established in 1861.
Bankers: Barclay, Bevan, and Co., and London and Westminster Bank, Lothbury.
English and Foreign Stocks and Shares and all other Securities dealt in for cash or account.

THE LLANRWST MINING DISTRICT.

Messrs. ENDEAN AND CO., having just made a tour of inspection of the mines in this district, are enabled to give intending investors the LATEST AND MOST RELIABLE INFORMATION respecting the principal properties in this rapidly improving mining centre. Llanrwst, South de Eresby, D'Eresby Mountain, D'Eresby Consols, and Aberllyn. Valuable information as to the future prospects of these mines on application.

MESSRS. W. REYNOLDS AND CO.,
STOCK AND SHARE DEALERS,
57, GRACECHURCH STREET, AND TALBOT COURT,
LONDON, E.C.

WILLIAM B. COBB, STOCK AND SHARE DEALER,
62, CORNHILL, LONDON, E.C.
Bankers: The Alliance Bank (Limited).

MR. TIMOTHY HUGHES,
MINING AGENT AND SHAREDEALER,
59, SEEL STREET, LIVERPOOL.
Reliable information given respecting Welsh and Manx Mines.

MESSRS. J. TAYLOR AND CO.,
MINING ENGINEERS AND INSPECTORS,
86, LONDON WALL, LONDON, E.C.,
Have Agents in England, Scotland, Wales, and on the Continent.

CYPRUS.—AN EXPERIENCED MINING ENGINEER on EXPLORING or PROSPECTING, for many years in America, and a Pupil of the Royal School of Mines in London, a native Greek of great commercial experience, and fluent with the Turkish, Arab, and Slavonian dialects, and their way of doing business, and laws as well, will be happy to MEET a PARTY or PARTIES wishing to participate in the enormous benefits which may accrue from his systematic undertaking in the EXPLORATION and ACQUISITION of MINES in the ISLAND OF CYPRUS, ASIATIC TURKEY, EUROPEAN TURKEY, BOSNIA, HERZEGOVINA, and BULGARIA provinces, where he is personally acquainted with different rich Mines. He will be reasonable and accommodating to responsible and serious parties possessing means. To direct communications (and not through agencies) only will pay attention, with whom he will be very happy to come to full explanations.
Address to "Mining Engineer," 18, Halsey-street, Chelsea, London, S.W.

TO COPPER SMELTERS.

WANTED, a COMPETENT PERSON to TAKE the MANAGEMENT of a COPPER SMELTING WORKS.
Applications, in writing, accompanied with testimonials, to be addressed to the Arendal Mining and Smelting Company (Limited), on or before the 16th inst.

WANTED, for the Assheton Mines, near Pwllheli, North Wales, AN ABLE MINING SMITH.
Apply, stating age, where previously engaged, whether as foreman or otherwise, and enclosing testimonials to the "Manager," on the Mines.

WANTED, a thoroughly RESPECTABLE and ENERGETIC ASSISTANT and TRAVELLING SALESMAN, in an Export Steam Coal Office. Must understand, at least, French thoroughly, and be accustomed to travel on the Continent. Applications, stating age, experience, and salary required, considered confidential.
Address, "W. G.," care of Davies and Co., Advertising Agents, Finch lane, Cornhill, London.

WANTED, about 400 ft. of 12 in. and 400 ft. of 18 in. GOOD SECONDHAND PUMP TREES, of modern make; also about THIRTY SETS of STRAPPING or JOINTS PLATES, for spears, about 20 ft. long.
Address, stating particulars and lowest price, on rail or boat, to JOHN RAYBOULD, Esq., Planet Colliery, Kingswinford, Dudley.

WATER-WHEEL WANTED, 30 to 40 ft., overshot, about 2 ft. breast, in good repair.
Apply to "Secretary," South de Eresby Mountain Lead Mining Company (Limited), 14, Queen Victoria street, London.

THE ENGLISH AND AUSTRALIAN COPPER COMPANY (LIMITED).

Notice is hereby given, that the HALF-YEARLY GENERAL MEETING of the shareholders of this company will be HELD on THURSDAY, the 15th day of August, at Two o'clock, at the Cannon-street Hotel, London, for the purpose of receiving a statement of the company's affairs since the last general meeting.
By order, CHARLES B. ROGERS, Secretary.
Offices, 6, Gracechurch-street, London, E.C., 7th August, 1878.
N.B.—The Transfer-books will be closed on Wednesday, the 7th August, and be re opened on Wednesday, the 21st August.

VAN RAILWAY.—Notice is hereby given, that the ORDINARY HALF-YEARLY GENERAL MEETING of shareholders in this company will be HELD at the offices of the Van Mines, near Llanidloes, on THURSDAY, the 22nd day of August next, at One o'clock in the afternoon precisely, to pass the accounts, elect directors and auditor, and to transact the general business of the company.
The Transfer-books will be closed from the 15th to the 22nd instant, both days inclusive.
By order, W. J. LAVINGTON, Secretary.
14A, Austinfriar, London, E.C., August 3rd, 1878.

FOR SALE, lowest price—10 Chicago Mining Shares, at 15s.; 10 Ruby Consolidated, 20s.; 20 West Wye Valley, 45s.; 20 Parys Mountain, 7s. 6d.; 50 Penstruthal, 4s. 6d.; 10 Leadhills, 36s. each.
Address, Mr. CURTIS, 79, Kirkwood-road, Nunhead, S.E.

FOR SALE (the whole or part):—

100 Bettws y-Coed.	30 Gorsedd and Merilyn.	100 New Bronfloyd.
100 Court Grange.	100 Glyn.	100 Parys Mountain.
4 D'Eresby Mountain.	100 Hultafall.	25 Temple.
	50 Hornachos.	

Address, H. WILKINS, 3, Heybourne Villas, Tottenham.

Lectures on Practical Mining in Germany.

CLAUSTHAL MINING SCHOOL NOTES.*—No. LXXXII.

BY J. CLARK JEFFERSON, A.R.S.M., WH. SC.,
Mining Engineer, Wakefield.
(Formerly Student at the Royal Bergakademie, Clausthal).

[The Author reserves the right of reproduction.]

SECTION V.

Exactly analogous to the description of timbering for levels called "coffres," which we have mentioned as being not unusual in Cornwall, is the so called "plank timbering," which consists of planking from 2 in. to 4 in. thick, and from 6 in. to 8 in. deep, laid on edge. Four of these planks when joined together form a sort of frame, or hollow box, 6 in. to 8 in. deep, of the dimensions of the shaft. The ends are joined together by means of the ordinary shaft scarfing (the ends of the planks are cut to half their depth at a distance from the end equal to the thickness of the plank), so that the outside of the timbering at the corners is perfectly flush. The pieces of wood cut off to form the scarfing joints are sometimes taken off the upper corner at one end, and the lower corner at the other end; at other times the upper (respectively lower) edge, and correspond then exactly to the ordinary scarf joint. This description of timbering is usually inserted by sinking the shaft for a depth of four or five of the planks, which are then inserted resting either on specially inserted bearing stempels, or two of the planks of the lowest set project (with half their depth), and are well notched into the sides. The space behind is, as usual, tightly packed with attle (best with clay), to prevent any movement of the ground.

This description of shaft lining is suited only for shafts of small dimensions, and where the pressure is but slight; and since the difficulty of repairing or renewing this kind of timbering is greater than that of most other descriptions, it is advisable to use plank timbering only where the conditions (such as constant and uniform wetness) are favourable for a long preservation.

In the case of large shafts, or where the pressure is considerable, this description of timbering will require some means of strengthening it. The most usual mode is the insertion of cross struts or planks, which serve at the same time as partitions for dividing the shaft into the various compartments required. Stringing beams are generally placed close against the planks of the longer sides, and are suitably strutted apart, either by means of round struts and props; or the stringing beams receive long grooves, in which the ends of the partition planks fit, and slide down tight upon each other. In addition to these the planking may be strengthened by stringing beams placed in the corners, and held tight apart by the means of struts across the shorter sides.

From our description of open crib timbering, solid crib timbering, and plank timbering, it will be seen that the same disadvantages are common to all. They are expensive on account of the consumption of wood, cost more placing in position, and occasion considerable difficulty when it is necessary to repair or renew them, and besides the plank timbering is comparitively very weak. The chief advantage in the first two is the great strength of the timbering. The above disadvantages, especially that of the inconveniance and expense attending the renewal of the timbering, cause the description of timbering we have called propped crib to be used where possible in place of the above.

It but rarely occurs that shafts are sunk square in horizontal section; and when this is the case the various modes of timbering used for rectangular shafts are also used for square shafts, the only difference which arises being due to the fact that all the sides are of equal dimensions, and therefore the distinctions which we have noticed between the longer and shorter sides disappear, though in many cases the position of the shaft with regard to the strike and dip of the strata or lode will still occasion those distinctions between the hanging or lying wall and what we have previously called the shorter sides.

A greater distinction arises, however, when the shaft is sunk with a polygonal or circular section. Shafts of this shape, however, are seldom timbered with wood alone, except in the case of going through water-bearing ground, where it is intended that the lining shall be watertight. The use of timbering in circular or polygonal shafts is chiefly resorted to as a temporary means of supporting the sides of the shaft until a more permanent lining of brick or iron is introduced. Considered in the abstract, the circular form is to be preferred, as offering the greatest powers of resistance, and indeed may be considered to result from the extension of the principle that the strength of the polygonal form increases with an increase in the number of the sides. In practice, however, the difficulties of construction prevent the formation of a good sound work where the number of separate segments is greater than eight or ten, which appears to be the average for shafts of from 10 ft. to 13 ft. in diameter. Strictly speaking, the use of a wooden lining is chiefly restricted to shafts of small dimensions.

The simplest case of such lining is the so-called hoop or bridle lining, from which these small shafts generally receive the name "hooped shafts." This hooped lining consists of separate hoops, or cribs, formed of (2 in. to 5 in. thick) pieces of oak, beech, or ash, which are bent to suit the curvature of the shaft. To facilitate this the pieces of wood out of which the segments are formed are generally immersed in water for some time previous. The ends of the segments abut against each other, the joints being placed radially, two adjoining segments being connected by two pieces of wood, placed one above and the other beneath the joint, and connected with the segments by wooden nails or pins. In other cases a better arrangement is to make the crib of two rings laid upon each other, the segments of the upper ring breaking joint with those of the lower ring—the joints of the upper ring are opposite the centre of the segments of the lower ring, and the joints of the segments of the lower ring opposite the centre of the segments of the upper ring. The two rings are joined together by means of wooden nails or pins, or they are bolted together. These cribs, or hoops, are wedged against the sides of the shaft, and in some cases are backed with covering wood on the outside of the cribs, the space between the covering wood and the sides of the shaft being carefully packed with earth, or the like. Formerly in this country it was very usual simply to nail the covering wood on the inside to the cribs. Of course this arrangement is out of the question where any pressure has to be met with; though where the rock is good, and it is necesaary to line the shaft to prevent any pieces (that may become loosened by the weathering action of the air currents) from falling dawn the shaft this method may be used. The former method, with the covering wood placed between the cribs and the side of the shaft, is that generally used as a temporary protection previous to lining a shaft with brick.

For round shafts, with only a moderate pressure, the tubbing may consist of circular cribs, placed at intervals, and supported from one to the other with props between them. The top and bottom cribs are wedged so as to give a watertight joint with the rock. The cribs are lined on the inside with planks, which are nailed to the cribs, the last plank or pile being wedged tight, so as to close all the joints. If the piles can be inserted dry they will swell when the water reaches them, and still further close the joints. In this the iron nails are easily corroded, and when, owing to this corrosion, one of the planks gives way the remainder generally follow with a run. Such an accident will most readily occur in the upcast shaft. To prevent this, this sort of lining is often strengthened by placing light wooden cribs on the inside of the planks, or piles; and these are entirely covered by a second cylinder of piles, or connected among each other by stringing laths, for the purpose partly of supporting the cribs, and also to prevent anything catching beneath and displacing the cribs.

Where the strata are comparatively loose, and some pressure is expected on the temporary timbering, this may be made stronger, and similar to the prop crib timbering we have described for rectangular shafts. That is, the cribs of themselves will be made broader and thicker (about 8½ in. broad by 6½ in. thick or high), and will be covered on the back with piles in the usual manner. To support one crib from the other four or more props (of the length between two cribs) are inserted, and as an extra precaution the stringing laths may be nailed on the inside of the cribs to connect them together.

Where the shafts are polygonal, and in many circular shafts in which the temporary timber lining is made polygonal in shape, the method becomes exactly analogous to that of prop crib timbering in rectangular shafts; a prop being placed at each corner between two cribs, and according to the number of sides in the polygon (8 or 10) four or five of the segments are notched in the sides of the shaft. As a rule it is advisable thus to notch every alternate segment into the sides of the shaft.

In the case of considerable pressure, and where the timbering is intended as a permanent lining for the shaft, solid crib timbering has to be resorted to. This, however, is now but seldom used, as a brick lining would probably be quite as cheap, and it would certainly last longer.

An example of prop crib timbering for the permanent lining of a deep shaft, given by Herr Lottner in his "Manual of Mining,"† is that at the Fischbachthaler shafts of the Duttweiler Colliery, near Saarbrücken. These shafts have a depth of from 400 to 500 yards, and are 17 ft. in diameter. The first 50 yards, passing through sandstone, is walled in the usual manner, and at this depth the wooden lining (prop crib timbering) commences. The cribs are made of [-iron in four segments. The breadth of the cribs is 8 in., and the height 3½ in., and the iron of which the cribs are made is ⅝ in. in thickness. The four segments are joined together by straps 16 in. long, made likewise of [-iron, which fits exactly the iron of which the cribs are made, and are, therefore, 7½ in. broad and 2½ in. high; four vertical bolts or pins are slipped through four holes in the strap, two of the bolts passing through each end of a segment. The bolts are simply inserted loose. These cribs are placed at distances of about 1 yard to 40 in. apart, and are backed with 2 in. thick oak lagging wood, which extends from the middle of one crib to the middle of the next upper lying crib. According to the nature of the ground a length of 10 to 15 yards is sunk, and then four bearers are notched in the sides, upon which the first crib is laid. The next crib is placed at a height of about 3 ft. or so above this first, and supported from it by means of six oaken props. The props, which are equal in length to the distance between two cribs centre to centre, are notched at both ends to more than half their thickness, and over a length equal to half the height of a crib. In this manner the outside of the props can be made flush, and to correspond with and as part of the lagging, at the same time serving principally as a support between the two cribs.

TIMBERING OF INCLINED SHAFTS.—The character of the timbering for highly inclined shafts will not vary much from any of those we have already described, but with a greater deviation from the perpendicular the character of the timbering will change, and as the shaft with a great deviation from the perpendicular (*i.e.*, with a slight inclination to the horizontal) may be considered rather as a highly inclined drift than a shaft, the timbering will partake more of the character of that we have described as used in the timbering of drifts or levels. The most usual, at the same time the simplest, case would be where the hanging wall or roof only requires to be timbered; this is done simply as we have above described by cross roof stempels notched into the sides, and where the ground breaks loose covered by flat piles. Where the sides are not sufficiently strong or compact to enable the stempel to be notched in them, the roof stempels (which are placed in contact with or against the lying wall) are supported at each end (and also in the middle where the shaft is divided into two partitions) by means of stempels notched in at the foot into the hanging wall, and the opposite ends being cut concave, so as to drive up tight under the ends of the roof stempels. Where the sides are loose these stempels may be backed with covering wood. In case all the four sides of the shaft are bad so as to require covering, and where the lying wall does not offer sufficient security for notching the side stempels, cross stempels (corresponding to the ground sills in a door set) are laid against the lying wall on which the side stempels are footed; it will rarely occur that in addition to the above the lying side must also be lagged with covering wood. In the case of very great pressure the stempels lying against the hanging wall are supported at each end by stringing beams, which are supported by the side stempels.

The above methods of timbering shafts, which we have considered, are intended chiefly for sinking through strata which are tolerably firm, and which present no great difficulty in sinking, either from water or other causes. It occurs, however, much oftener in the case of sinking shafts than in level driving that the nature of the ground is such that the excavation will not remain open for the length of time, and for the distance in advance, which we have pre-supposed and which is necessary in case of the timbering of the shaft according to the methods we have just considered. In many cases it may be necessary that the lining of the shaft should precede somewhat the excavation of the ground, or at least follow close upon it, and under such circumstances recourse must be had to some method analogous to that of spilling or driving, which we have described in the chapters on the timbering of levels. This description of timbering receives the same general name—pile driving or spilling, and specially shaft-spilling. Most usually this kind of strata, which are met with nearer the surface, are accompanied by large quantities of water, which to save the expense of pumping, and to avoid the liability of the pumping-engines being overpowered and the mine flooded, must be kept back by a suitable water-tight lining. This kind of water-tight lining usually goes by the name tubbing, irrespective of the material used. As most modes of tubbing shafts, pre suppose that the water-bearing strata are sunk through before the water-tight lining is commenced, where the ground is quick, loose, &c., it will be necessary to hold back the strata by temporary timbering, often by the above-mentioned shaft spilling. Whether the shaft be lined in a water-tight manner or no will depend chiefly on whether the volume of water is so great that the interest on the cost of engines, &c., and the continual expense of pumping is much greater than the interest on the first cost of a water-tight lining. The water-tight lining of shafts by means of wooden tubbings will be considered in the general chapter on the water-tight lining of shafts, and we have, therefore, in concluding this sub-division on the timbering of shafts only to consider the method of lining shafts by spilling, with a few modifications.

MANUFACTURE OF CAST-STEEL.—Hitherto cast-steel has been produced by the fusion of converted steel in pots or crucibles with or without the admixture of other ingredients, but Mr. W. H. NEVILL, of Ferryside, Carmarthen, has discovered that by reversing the usual order in which the processes of conversion and fusion are carried on—that is, by recarbonising fused metal—he obtains a high quality of steel at a considerably reduced cost. In carrying his invention into effect he takes metal that has been made by the ordinary Siemens or Bessemer processes, and after the necessary forging and rolling, or either of these separately, and after having brought the metal into the required size and form, he submits it to a recarbonising process in closed vessels, or as nearly so as he is able to obtain them. These vessels may be of cast or wrought iron, or fire-clay, or other material capable of resisting the requisite heat, and the carbonizing materials may be the ordinary substances used in the cementing process as at present carried on. He prefers, however, to carry on the operation in wrought-iron vessels, about ⅝ or ¾ of an inch thick, and of such a form as will best suit the purpose for which the steel is intended. He has used them from 3 to 5 feet in length, and from 6 to 10 inches square, but he does not confine himself to these dimensions. The covers are made to project beyond the sides of the box, so as to admit of their being firmly fixed with keys, or wedges, or other suitable means, and the interstices afterwards filled with wet clay or other suitable material, rammed in tightly. The process may be carried on in an ordinary reverberatory or gas furnace, and will require such a time and degree of heat as the purpose for which the steel is wanted may render necessary.

* Being Notes on a Course of Lectures on Mining, delivered by Herr Bergrath DR. VON GRODDECK, Director of the Royal Bergakademie, Clausthal, The Harz, North Germany.

† The text book on mining used not only at Clausthal, but in all (we believe without exception) the mining schools of Germany.

THE PARIS INTERNATIONAL EXHIBITION.

No. XII.

The court in the Exhibition belonging to the Cape of Good Hope is situated adjacent to that of Canada, and is small in comparison to the latter. It is, however, well filled with articles produced in South Africa. The soil of the Cape is very fertile, and offers at its various elevations the most ample choice to cultivators; in fact, everything which can be grown in tropical and temperate latitudes can be grown here. The general structure of the colony is now known with a considerable degree of precision; but only a small portion of it, however, has been surveyed. At the Peninsula granite rocks exist in an intrusive state. Granite and clay-slate are, as, may have been expected, the principal underlying formation throughout the Western district. The superincumbent metamorphic clay-slates and schists spread over a considerable extent of country forming the shore-beds of the colony. The great sedimentary deposit of quartzoic sandstone is supported by the clay-slate. No fossils have as yet been found in either the clay-slate or sandstone formations. In some portions of Table Mountain and other places pebbles are found embedded in the sandstone. The higher, or second, range of mountains consist, for the most part, of argillaceous shale and coarse red sandstone, containing fossils, which seem to indicate that these strata are of the Upper Silurian and Devonian period. Granite, gneiss, and metamorphic schist prevail on the West Coast, from the Oligont's river northward, and towards the Orange river. The valuable copper mines of Namaqualand exist in this tract. Felspathic rocks of a peculiar nature, of an intrusive character, run through the gneiss in an eastern and western direction. This intrusive mass is locally termed the copper bearer, and the cupiferous veins are distinctly associated with it. Some of these lodes are very rich in ore. The mountains and plateau of Bushmanland have caps of gneiss, schist ore, and quartz rocks. That peculiar class of rocks called rose quartz is very common. Amethyst, garnets, tourmaline, and jasper occur in the schist rocks along the Orange river basin. The Devonian fossiliferous rocks are succeeded upwards by the carboniferous, which stretch over a very large tract of country. This formation has been penetrated in many directions by large masses of igneous matter.

A peculiarity of the sandstone and shale formations composing the carboniferous system is that the intrusive influences have left the beds in a horizontal position. The colony of the Cape of Good Hope has very rich mineral resources, copper being one of the most important. The copper mines of Namaqualand have been worked more or less for 20 years. The first shipment took place in 1852. Since that time over 110,000 tons of copper, averaging 30 per cent., have been exported. The yearly quantity was about 7000 tons, but it is now approaching 12,000 tons per year. One of the principal mining stations is at Ookiep—a place about 5 miles from Springbok, and 90 miles from Port Nolloth. The places are connected by railway, and the population is about 2000, many of whom are working in the mines, and conducting such surface operations as are required in connection with the mines.

About 20 miles from Springbok, at Spectakel, another mine is being worked, and the population at this place is about 600. A third mining establishment exists about 8 miles from the one last named. The copper mines of Ookiep are owned by the Cape Copper Mining Company (Limited), and the working of the mines has been marked by very great success, and with a considerable profit to the company. The following statistics will show the yield of this mine from 1870 to 1875:—

Year.	Yield per annum—Tons.	Per cent. of metal.
1870	5,300	29·38
1871	6,071	32·00
1872	6,900	33·25
1873	5,955	32·62
1874	9,185	31·50
1875	10,000	31·00

The recent yield of these mines has been at the rate of 1000 tons per month, and it has been stated that in 1877 the profits derived amounted to 80,000*l.*

There are many valuable deposits of manganese in this colony, and a private company has been formed, and is now working a manganese mine at a place on the top of the Drakenstein Mountains, at a distance of about 30 miles from Cape Town. The ore at this place is very rich, yielding from 70 to 90 per cent.; it is also very plentiful, and is transported from the mine to the Paarl Railway station upon an aerial wire tramway, 5 miles in length. At a place about 20 miles inland of Port Elizabeth iron ore deposits occur in immense masses; some of these protrude to the surface, having the appearance of rocks. This ore is manganiferous, and contains as much as 80 per cent. of iron; but the cost of land carriage to the nearest port is at present too great to allow of the ore being utilised. Lead ore, hematite, and other iron ore occur in many localities, and are only awaiting the development of some of the coal fields to be properly worked and disposed of.

In the court will be found specimens of coal and copper ore exhibited by the Cape Copper Mining Company, a case of diamonds exhibited by the Trustees of the South African Museum, together with another case of precious stones of different kinds. The proprietors of the manganese mines near Wellington have specimens of manganese ore. There is also a very fine model of Table Bay Docks and Harbour Works, at a scale of 50 ft. to 1 in., representing the following:—1, Alfred basin; 2, outer basin; 3, graving docks in course of construction; 4, engine-house; 5, patent slip; 6, Customs offices and Queen's warehouses; 7, dock offices; 8, warehouses; 9, port and life-boat house; 10, water police station; 11, workshop; 12, machinery store; 13, stables; 14, magazines; 15, fire engine house; 16, residence and office; 17, Latrines and Co.; 18, convict station; 19, workmen's cottage; 20, road to Cape Town; 21, spot where first wagon was tipped by H.R.H. the Duke of Edinburgh, Sept., 1860; 22, time ball, dropped by electricity from the Royal Observatory.

A number of printed books are exhibited, including two volumes, the Census of the Cape of Good Hope for 1875. Also very fine album of photographs; case of valuable feathers, the base of which is surrounded by a variety of mineral specimens; case of wool from the Victoria Mills; also, a larger case of ornamental feathers, birds, fossils, cigars and tobacco in crude state, as grown at the Cape; stand of wine; specimens of different kinds of wood and bark; also many samples of ivory in the tooth. There are frames containing photos of aboriginees of the Cape of Good Hope, together with large-sized photos of aboriginal chiefs; also series of beautiful photographs of towns and other places in Cape Colony. Three cases of seeds raised at the Cape. Very fine Cape cart, and variety of leopard and tiger skins, with native weapons; also, a geological sketch-map of the South of Africa, of small dimensions, showing:—

Glacial conglomerate.		
Tertiary.		
Enon conglomerate and Sunday river beds ...	Oolitic.	Mesozoic.
Stormberg beds, coal bearing, Upper Karoo beds, Lower Karoo beds ...	Triassic.	Mesozoic.
Durgka conglomerate.		
Zuurberg, Zwartberg, and Witteberg sandstone ...	Carboniferous.	Palæozoic.
Bokkeveldt beds	Upper Devonian.	Palæozoic.
T. M. sandstone	Lower ditto	Palæozoic.
Malmesbury beds, silurian.		
Namaqualand schist	Metamorphic.	
Gneiss	Metamorphic.	
Granite.		
Dolerite dykes.		
Dioritic ditto.		
Porphyry, amygdaloid, &c.		
Diorite.		

An inspection of the above section will show that the coal measures are found in what is known as the Karoo beds in the lower

part of the mesozoic or triassic formation, which seems to form a good part of the Stormberg Mountain. A geological survey of this district has been completed by Mr. Dunn, the Government Geologist, and, as far as has been ascertained, the coal measures are about 1000 ft. thick, and rest conformably upon the Upper Karoo beds. The seams of coal are separated by beds of brown shale, but the authorities have not yet supplied any detailed sections of the coal measures. Seams of coal also occur in some of the beds of sandstone. A most important outcrop of coal has been traced between the Doorn and Indive rivers, division of Wodehouse, elevated as much as 4700 ft. above the level of the sea. The coal has been proved to be 6 ft. 6 in. in thickness. At Biggarsberg, in Natal, a seam of coal has been discovered in a solid condition, as much as 8 ft. in thickness. In the north-eastern division of Albert, Ailirval, and Wodehouse coal has been worked for some time past; but it is not equal in quality to the English varieties. The percentage of ash in the coal worked at Vice's and Hatting's ranges from 17 to 27 per cent.

One of the most remarkable discoveries made in modern times, as far as mining industry is concerned, is the diamond fields of the Cape. Washing for precious stones was carried on prior to 1871, or about 1868, along the banks of the Vaal river. The largest diamond found there was 288⅜ carats; but the dry diggings having been hit upon in 1871 they soon eclipsed all previous finds. Up to the present time the yield of diamonds has amounted to 12,000,000*l.* A very peculiar feature connected with the production of diamonds from the dry diggings is that the field in which they are found is not more than 9 acres in extent. It has now been ascertained beyond doubt that this diamond-producing area is nothing more or less than the crater or outlet of an old volcano. The continued working has determined its funnel-like form, and, although the debris has been excavated to a depth in the crater of 300 ft., diamonds are still found. It will be a very curious matter to determine the deepest point at which the production of diamonds will cease to be found in this particular field. Other fields were discovered which produced diamonds, some of which extended to 30, 20, and 15 acres respectively; but these did not prove so rich as the smaller area previously alluded to. It appears that from 34½ loads extracted from the works of the crater 690 diamonds were obtained. From one of the claims there were obtained, in 1873, 1680 diamonds, of an aggregate weight of 803 grs. troy. The Government Engineer, Mr. Oates, says—"There does not appear the least evidence on which to base a theory of convergence as greater depth is obtained. There have been conjectures raised respecting the area of the mine diminishing as greater depth is attained; but there are really no grounds whatever for such conjecture, and the opposite—that the walls diverge instead of converge may be argued—with equal force." The lots, or claims, in the earliest times of excitement were sometimes sold at enormous prices—half a lot, 30 ft. by 16 ft., and already worked down to a depth of 50 ft., having actually realised 24,000*l.* It is curious that an Irishman after a few hours search discovered a diamond, which he was able to pawn for 300*l.* Another individual discovered one of 115 carats upon an abandoned claim. One of the great diamonds that has been found was called the "Star of South Africa," and before cutting realised 11,200*l.*

In 1870 the revenue of the colony amounted to 668,240*l.*; but since that time there has been very large increase, and in 1877 the revenue was 1,403,200*l.*, of which sum 652,104*l.* was due to the Customs. The expenditure for the year 1870 was 625,874*l.* In 1877 the total imports amounted to 5,158,348*l.* In 1870 the value of the exports amounted to 2,331,979*l.*, and for the five years ending in 1875 it was 4,012,576*l.*, which gave an increase of over 72 per cent. The exports for 1877 amounted to 3,542,694*l.* There is exhibited in the Cape of Good Hope court a map of the Transvaal, by F. Jeppe, F.R.G.S., Pretoria, 1878, showing all particulars as determined up to the present time. This district seems to be well watered, with fertile soil, rich pastures, and valuable mineral deposits. The climate is very favourable for Europeans. There is an immense tract of coal-bearing measures reaching from the Vaal river nearly up to Middleburg, and within about 35 miles from Pretoria. Iron, copper, cobalt, pyrites, and other ores are distributed over this tract of country. In the North State of the Transvaal gold has been discovered. It is also known to exist beyond the Limposso river. Some other fields were discovered in 1872 and 1873, which contain sufficient quantity of precious mineral to justify exploration. The gold sells for 3*l.* 18*s.* per oz. The workings are, of course, alluvial, and nuggets of from 4 lbs. to 17½ lbs. weight are sometimes picked up. Some of the most experienced Australian miners have concluded that from all appearances extremely rich deposits must yet be brought to light. An English company has already been started for working reef diggings near Marabastad, but with what results do not appear.

SELF-ACTING CAGING AND BANKING APPARATUS.

At the North Staffordshire Mining Institute bi-monthly meeting, at Stoke-upon-Trent, on Monday (Mr. John Strick presiding), Mr. W. R. Wills, of Rowley Regis, read a paper on "A Self-Acting Caging and Banking Apparatus." In the course of his remarks he said the invention is intended for facilitating the loading and unloading of mine cages, by which a saving of both time and manual labour is effected; for while, on the one hand, the loading and unloading at the cage are rendered entirely self-acting, thus doing away with the services of either one or two men, as the case may be, on the other hand the use of an inclined plane gives the maximum speed in the operation. The apparatus can be adapted to most existing pit tops and cages. The rails on the pit top form part of an inclined plane continuous with the rails on the cage bottom. On the higher or loading side of the pit is placed a lever turning on an axis, and having two forks before and behind the axis. The end of the lever is jointed in such a way that the upward motion of the cage bottom merely lifts it up, but it cannot pass downwards without forcing the front end of the lever down. The lever is retained in its normal position by a weight, and when in this position the front fork projects above the tub axles, and holds the tub in position, the second tub resting against the first. The cage having been drawn up out of the shaft, the engines are reversed, and the cage placed on the legs. The cage, in descending on to the lever end, forces down the front catch, releasing the first tub, which immediately runs on to the cage, while the second tub is held back by the rear catch, which rises as the other falls. When the lever end is pressed into position a hook or weighted catch falls over the end to prevent the lever rising. When the cage is lifted off the legs this catch is struck off by a tongue some feet down the shaft, and the lever is then free to work. The cage being loaded is eased off the legs and lowered into the shaft; the lever end describing the arc of a circle is released by the downward movement of the cage, and returns to its normal position. The second tub being thus released runs into the place occupied by the first, and on the cage again arriving at the pit top the same action takes place. Mr. Wills then went on to describe the mechanism by which the tubs are retained in and released from the cage, his remarks being illustrated by some large diagrams, and also by a fine model of the apparatus. He added that the apparatus is quite capable of loading two, three, or more decks at once. In answer to questions, he said both loading and unloading are self-acting, and the loads can be put on and off the cages quicker than by hand.

Mechanical Metallurgy.—A treatise which promises to be of much practical utility is now in preparation—Mineral Dressing: the Art of Mechanical Concentration and Separation of Ores, Rock, and Coal, &c., in Theory and Practice, by F. M. F. Cazin, Mining and Civil Engineer—and is to be published in one large octavo volume, by Messrs. H. Carey, Baird, and Co., the well-known industrial publishers in Philadelphia. From the prospectus of the work it appears that a general outline of the science of metallurgy will be followed by explanations of the method of selecting and rejecting ore for dressing: the natural principles involved in mineral dressing, and which mines should work their ores by mechanical treatment. Stone-breakers, sizing machinery, separators of various kinds will be described, and their relative value discussed, and there is to be a chapter on the general arrangement of mineral dressing works, and their location and management, including cost of construction and working expenses. Mr. Cazin's name is well known from his numerous communications to the readers of the *Mining Journal*, and there is little doubt that even in this country his book will receive considerable patronage.

NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS.

The annual meeting of members was held on Saturday, at which there was a large attendance of members and others, and more than usual interest was attached to the proceedings. The report stated that the attention of the council had been specially directed to the occurrence of colliery explosions. This Institute, the first of the kind formed in the country, had for its main object the prevention, if possible, of colliery accidents, and many valuable papers have been published in the Transactions on the theory and practice of ventilation, and also on all the operations connected with coal mining. Experiments are now in progress, and materials are being collected by some of the members, for the purpose of making out a paper on colliery explosions, which will be read in October. The retiring president, Mr. Lindsay Wood, occupied the chair.

Mr. T. Wood Bunning (the secretary) read the annual report of the council. It stated that it was the duty of the council in their report of last year to draw the attention of the members to the advantages which the acquisition of a Royal Charter would give to the Institute, and to the revision of the bye-laws which such acquisition necessitated, and it was now their pleasing task to state that these alterations had produced most excellent results. The admission of a class of members who had duly qualified themselves as engineers by having been engaged for some years in responsible positions, and by giving them, when admitted, certificates showing that the council had considered the status of the applicants would, it was hoped, tend considerably to keep up the prestige of the Institute, and the council had now the pleasure of being able to state that they were not mistaken in their predictions, and that the number of gentlemen who had aspired to be enrolled as members shows that the distinction is appreciated and sought for, and augurs well for the future position of the Institute. The most pleasing feature in the proceedings of the past year had been the visit which the members made to the coal fields of the North of France in June last, where they were received most courteously by their professional brethren. Thanks to the excellent papers of Mr. H. Laporte and Mr. T. Lindsay Galloway, the members had an excellent opportunity of studying much that was interesting in this important coal field, and were in a better position to observe its peculiarities. These papers, together with a description of the collieries and works visited, which had been compiled by the secretary and translated from various documents, and the plans and maps illustrating the same, will enable the members to find in the Transactions of the past year a complete history of the progress, present position, and modes of working pursued by our neighbours, and the interest attached to these details has been much enhanced by the very lucid discourse of Prof. Gosselet on the probable extension of the field, and on some of the more prominent geological features of the district. In addition a very pleasant and instructive visit was made last year to the Stonecroft and Setlingstone Lead Mines and Prudhoe Quarries, and it is the intention to organise similar excursions in the neighbourhood from time to time. During the year there has been a considerable increase of expenditure over income caused by the expense attendant on publishing the following valuable works:—"Illustrations of Fossil Plants," the "Catalogue," and the first volume of the "Borings in Northumberland and Durham," but the capital account has been increased to about the same amount. These works had been paid for during the past year, but had hardly been published long enough for the amount of sales to afford an appreciable asset against the expenditure, but it was hoped that the funds of the Institute would reap the benefit of this next year, and its income thereby be materially increased. The Transactions of the past year had been of unusual interest. The deaths by explosions of gas in mines in the United Kingdom during the year had unfortunately been more than usually numerous, and included those of several valued members of the Institute. These misfortunes had occupied the serious attention of the council, and they hoped the result of experiments now being carried on by some of the members would form the basis of a valuable paper, which it was proposed to read at the meeting in October.

The President, in moving the adoption of the report, said that the visit to France was the first which the Institute had made to any foreign country, and he was sure that every member who attended the meeting could not be otherwise than exceedingly gratified with the visit. He himself was very much astonished to find that the plant which they had at the new collieries there was very much greater and more magnificent than anything he had seen in this country. Some of the engine-houses were magnificent structures, and their engines were amongst the finest he had seen, while their valve gearing and other arrangements were most perfect. Unless he had seen them he would not have believed that the engines, engine-houses, plant, and heapsteads had been brought to such great perfection, and their thanks were very greatly due to the members of the French society for having afforded the opportunity of seeing through the works. The only drawback, if it was a drawback, was the amount of hard work they had to go through, so much having been crammed into one day. They no sooner saw—or, rather, got a glimpse of—a colliery than they were hurried off to another still better worth seeing, and as much was put into each day as would have taken a fortnight. The loss of life by explosions in mines had this year been excessive. He believed the number was nearly 500 over last year, and arose from two explosions—the loss of life in one being 240, and in the other over 200. It would be the duty of the Institute to consider the cause of these explosions, and, if possible, to find out some means by which they could be avoided. The Institute had done a great deal in that direction, but more was required, and he hoped that still more attention would be paid to it in order to obviate these great calamities.

Mr. E. H. Livering, A.I S.M., read a paper "On a New Method of Detecting Very Small Quantities of Inflammable Gas, and of Estimating the Proportion Present." The paper was illustrated by experiments with the apparatus in the laboratory of the College of Physical Science, kindly lent by permission of Prof. Freire Marrecco. The members expressed great satisfaction with the apparatus; and on the motion of Mr. J. B. Simpson, seconded by Mr. Wm. Cochrane, a vote of thanks to Mr. Livering was carried by acclamation.

Mr. G. B. Simpson, in introducing the discussion of a paper read by him "On the Mining Industries of Prussia," said that in Prussia as well as in England the output of coal was increased year by year, and in face of the depressed times it seemed rather a singular circumstance, especially as they observed the same thing in every country in Europe. In this country during the last ten years they found the output had increased from 100,000,000 to 134,000,000 tons, or an average of about 3 per cent. per annum, and he believed pretty much the same ratio of increase was going on in all the countries of Europe. This progression one could scarcely understand when we heard so much about the depressed condition of the coal and iron trades. Coal was being used for some purpose or other. It might be that there was some silent expansion of trade which we did not see. The population had increased during the past ten or twelve years at the rate of about 1¼ per cent., and if any gentleman could explain the reason of the output being continually advanced it would be very interesting.

Mr. G. C. Greenwell: There was one way of accounting for it. If you worked any given number of coals in a year, and that same quantity in the following year, it was clear there had been no falling off, but if you opened pits and put up machinery to raise double the quantity you only gave each pit half work, and then each said "How very bad trade is."—Mr. Simpson; But there is more work done.——Mr. Greenwell: That shows trade is improving, but if you double your producing powers, and you have each only half employed instead of fully employed, it is not correct to say trade is bad; it is that you have increased your powers of production too much.——Mr. Wm. Cockrane said, then Mr. Greenwell argued that trade was not bad.——Mr. Greenwell said he went upon statistics. If they put upon the market more than the country required they brought down the prices, and they made the result worse by increasing the demand for labour. It was burning the candle at both ends.——Mr. Simpson said Mr. Greenwell's argument would hold good with regard to the iron trade.——Mr. Greenwell said it would. The actual use of both minerals in this country was greater than in the previous year.——Mr. Weeks: That shows trade is good, but that prices are bad, hence the complaint; and it has been brought about in the way Mr. Greenwell states. The production is going at a greater ratio than the expansion of trade.——The President: That is over-production.

The scrutineers of voting papers for the election of officers reported that Mr. G. C. Greenwell had been elected president, and that the following were the vice-presidents—Messrs. I. L. Bell, G. B. Foster, C. Mitchell, Wm. Cochrane, W. Morley, and A. L Steavenson.

Mr. W. Cochrane said their late president, Mr. Lindsay Wood, had for three years filled the office so entirely to the satisfaction of the members that he (Mr. Cochrane) was sure they would join with him in returning their best thanks to Mr. Wood for the very able manner in which he had fulfilled his duties. (Loud Cheers.) He need only remind them of the important advantage which the Institute had gained during Mr. Wood's occupancy of the presidental chair, and mainly by Mr. Wood's strenuous efforts in obtaining the Royal Charter, which they now possessed, and from Mr. Wood's presidency dated a most important era in the history of the Institute. Not only that, but the whole proceedings of the Institute, and the conduct of its business, and the able manner in which Mr. Wood had represented the Institute at the various meetings outside Newcastle during his presidency had been extremely successful, and he asked them to carry by acclamation a vote of thanks to Mr. Wood for the very valuable services he had rendered to the members. (Applause).——Mr. Wood, in acknowledging the compliment, said they had in Mr. Greenwell elected a successor who was in every way qualified to fill the office. He had known Mr. Greenwell personally from the commencement of the Institute, and knew he had taken great interest in it. He believed that in some of the papers which were written by his father in 1852, and laid before the Institute, he was greatly assisted by Mr. Grenwell, and he was sure that in Mr. Greenwell they would find a gentleman in every way well fitted for the post.——The President-Elect thanked the members for the honour they had done him, and the meeting shortly afterwards terminated.

THE HAYDOCK COLLIERY EXPLOSION.

In the House of Commons, on Thursday, Mr. Macdonald called attention to the evidence tendered at the enquiry into the cause of the Haydock Colliery Explosion. He remarked that on Dec. 26, 1868, an explosion occurred there by which 26 persons lost their lives. An inspection was held, and the Inspector reported in terms not very flattering to the manager. He stated that there had undoubtedly been an accumulation of gas. In a well managed colliery the workmen ought not to be allowed to enter when there was an accumulation of gas. But the workmen in this case were allowed to go into the colliery, an explosion occurred, and 26 persons lost their lives. One would have thought that after that calamity there would have been extra care and skill in the management of this mine; but in July, 1869, there was another explosion in it, and 59 persons lost their lives by that explosion. Within eight months an explosion occurred under nearly the same circumstances, the only difference being that the Inspector declared that the mine was well managed and the manager was an "exceedingly good manager." How a destruction of 85 lives by explosion by gas could result under the management of a good manager he was totally unable to see. He might be told that there was neglect on the part of those who were under the manager, but he had yet to learn that the owner or the manager of a mine could relieve himself from the obligation imposed on him by the Mines Inspection Act. If the manager was not aware of the accumulation of gas his ignorance was a crime. In about nine years after the explosion last referred to the country was startled by that terrible explosion which took place at this mine, whereby 195 persons lost their lives. The Home Secretary sent down a legal gentleman to see that the enquiry on the subject was properly conducted. That enquiry was he (Mr. Macdonald) thought searching and complete. It lasted about ten days. Nearly 200 witnesses were examined. Many witnesses told the tale of the condition of this mine. One gentleman was so irreverent as to place the accident on Him who rules the affairs of this world. But the evidence told an entirely different tale. He had collected statements of a few of the witnesses to show that if the mine had been worked carefully or skilfully the manager must have known the actual condition of the mine. The hon. member then quoted evidence from various witnesses to the effect that many of the workmen were aware for long periods before the explosion that there was an accumulation of gas in the mine. At the coroner's inquest three witnesses appeared in connection with the management. The first, who was a foreman, stated that there was no gas in the mine, but on cross-examination he had to admit that during weeks before gas had been oozing out and showing itself in the goaf, that barriers had been put up, and that he had never communicated these facts to the manager of the mine. Next, the certified manager stated that it was not a gassy mine, but he admitted that he had seen gas in it. Then came Mr. Chadwick, the manager, the effect of whose evidence was that the men under him were permitted to make magazines of gas which might at any moment explode and destroy the lives of the miners, and that they thought these things were too trifling to deserve notice. Although the Inspector of the district called it a well-managed mine, it was acknowledged that none of the discipline requisite for safety was observed. The experts ascribed the explosion to a sudden outburst of gas, but three experienced Inspectors of Mines were called—Mr. J. Dickenson, Mr. Hall, and Mr. Hedley—and their testimony went to show that no sudden outburst of gas was necessary to account for the explosion, and that it had been occasioned by defective ventilation. He might be told that he ought to leave the Government to deal with that matter in its own way in consultation with their law officers; but if he took that course the subject would probably lie over for another six or seven months, during which time they would, perhaps, have other calamities of the same kind occurring that would obliterate the Haydock disaster from men's minds. In 1875, 143 persons were killed near Barnsley by an explosion in a mine in which, according to the verdict of a jury, the general and special rules of the colliery had been disregarded; but nothing had been done in that case. Again, in October last, 209 persons were killed at Blantyre Colliery, and the enquiry disclosed that every rule for the good government of the mine had been neglected. But the person under whose management that occurred was still manager of the mine; and no step had been taken to make anyone answer in a court for what had happened. About 25 years ago, when two explosions had occurred in Scotland, the procurator fiscal of the district brought the managers of the mine before a jury at Glasgow; and though the verdict was "Not proven," the practical effect was to put a stop for a very long time to similar accidents. He was confident that that would be the result whenever the owners or managers of a mine were put on their trial; and he could say, from what he had himself seen after the Blantyre explosion, that popular indignation demanded the trial of those whose negligence had been culpable. The forms of the House would not permit him to move his resolution, but he trusted that the Government would make searching enquiries into the subject. (Hear.)

Mr. Bell, having some acquaintance with the manner in which Inspectors of Mines performed their duties, could say that those duties were, generally speaking, most carefully and honestly discharged. It was, however, open to question whether they had not in many instances too much imposed upon them. It was impossible frequently to examine sufficiently closely the various ramifications of a coal mine, but there ought to be no difficulty in determining whether the ventilation was defective. A very limited quantity of gas was sufficient to cause a violent explosion, and the difficulty which colliery managers had to overcome, therefore, was to intro-

duce sufficient air into the mine to dilute all the gas in it below the exploding point, (Hear, hear.)

Mr. Plimsoll related cases of negligence which he himself had witnessed in mines in South Yorkshire, where, not long subsequent to his visit, explosions attended with great loss of life occured. He believed that the theory of a "sudden outburst of gas" was often made to cover cases of pure and simple negligence. He was convinced that if the Home Secretary were to punish severely all men proved to be guilty of negligence in mines, a very large decrease in the number of explosions would occur.

Sir M. W. Ridley characterised the course taken by the hon. member for Stafford in bringing an indictment against the managers of a particular mine on the present occasion as a somewhat inconvenient one, seeing that the Home Secretary, as the hon. member must have been aware, was not in a position to express an opinion upon the case either on one side or the other. (Hear, hear.) His right hon. friend the Home Secretary would not shrink from any responsibility connected with the law; and he might take that opportunity of saying that there never was a Secretary of State more ready to listen to any complaint or to any abuse brought before him than his right hon. friend. He understood the right hon. gentleman to express a wish that the Government would make enquiry, and if there was negligence proved to prosecute. The Home Secretary had always done that. Under the circumstances he did not think the House would desire to prolong the discussion.

Mr. Bell explained that he had expressed no opinion upon this particular explosion.

Mr. Burt said he had read the whole of the evidence relating to this unfortunate explosion, and he certainly thought it showed there was mismanagement. He did not deny that outbursts of gas frequently occur, and that a pit might be safe under ordinary circumstances and quite unsafe soon after by a sudden outburst. Sufficient margin of good ventilation should be left; and he agreed with the hon. member for Derby that these outbursts were made use of as a sort of mask to cover mismanagement. The Home Secretary was most anxious to see the law enforced, but while acknowledging this he thought that in cases of this sort, where there had been, as he thought, continual mismanagement—at any rate very bad ventilation and laxity of discipline in the mine—a good effect would be produced if the certificates of the managers of the mine were either suspended or even the stronger step taken—a prosecution on a charge of manslaughter. (Hear, hear.)

Mr. Cross said he could not give any opinion on this case, as he had not yet received advice as to whether any offence against the law had been committed, and, if so, whether there was reasonable evidence on which a prosecution could be instituted. His first duty was to obtain legal advice on these points after due enquiry was made, and then further action rested with him, and he was not going to shirk responsibility. (Hear, hear). He was glad reference had been made to the managers of mines. He wished to let it be clearly known that he would deal with the certificates of managers of collieries as the certificates of captains of vessels were dealt with by the Board of Trade. (Hear, hear.) Every one knew that, as a matter of course, the Board of Trade frequently did try whether captains of vessels should be deprived of their certificates on the ground of incapacity or negligence. He would put the managers of mines on the same footing and the section of the Act dealing with this matter must not be regarded as a dead letter. As to ventilation, that was a question which must be enquired into quite irrespective of the point whether there was to be a prevention or not; they must see whether the Inspector himself ought to have found out before the accident occurred that the ventilation of the mine was defective. That was a question which must receive very careful consideration. He did not wish to attach any blame to the Inspector; he had formed no opinion one way or another; this, like every other case, would receive careful consideration.

After a few words from Mr. O'Connor Power, the subject dropped.

SUPPLYING AIR TO MINES.

Mr. John Sturgeon, of Crosby, near Liverpool, engineer, has patented an improved system of supplying air to coal and other mines, and apparatus used therewith. Heretofore it has been the practice to ventilate coal mines by means of a current of air drawn through the various roads and working places, which current is produced by drawing or sucking up the air through one shaft while it descends through another, the air being directed through the various working places of the mine by means of air-ways, bratticings, stoppings, and other contrivances on its way from the down-cast to the up-cast shaft. This system has, however, this disadvantage that the vacuum produced by the draught up the up-cast shaft has as much tendency to liberate and draw into the mine the gases from the coal as to draw in the outside pure air, and must, in fact, act first upon the internal gases, which are nearest to it. A much greater quantity of air is thereby rendered requisite to dilute the gases drawn in sufficiently to render them harmless; and the condition of the mine as regards ventilation is so delicately balanced as to be often dangerously affected by even slight atmospheric changes. According to this invention, instead of sucking air through the mine, the inventor proposes to force it into and through the workings under pressure, the compressed air being conveyed direct to the furthest end of the mine and the working places, from whence it is allowed to find its way back to the outlet shaft in the most convenient way. For this purpose he proposes to close up the entrance to the mine at the bottom of the shaft by a system of air-tight chambers or "air-locks" (hereinafter described), all other outlets through which air might pass out being also closed up and made as far as possible air-tight. Pipes laid along the road and other places wherever convenient through the mine are supplied with compressed air from suitable air compressing or forcing machinery at the top, these pipes being provided with nose couplings, valves, &c., to enable the compressed air to be let out into any part of the mine, wherever required, until it attains the desired pressure in the mine, so as to hold back as much as possible the gases from entering, and at the same time supply the necessary volume of new air as the old air becomes vitiated and is passed out.

The object of the air locks above referred to is to allow of ingress to and egress from the mine both for the coal wagons and the miners in passing to and from the shaft, without allowing the air to escape too rapidly. These locks consist of air-tight chambers, provided with air-tight doors on the inside towards the mine, and on the outside towards the shaft, these doors being so arranged that the one cannot be opened until the other is shut. He proposes to provide separate air-locks for the full and for the empty wagons, of sufficient size to contain the number of wagons taken at each lift of the cage, and also separate locks for the men. The wagons can be shunted through these locks by opening one door, passing them in, then closing the door after them, and then opening the other door, the men passing through their locks by a similar process.

In order to avoid inconvenience from the sudden blast of air that would issue from the locks in opening the doors, the inventor applies valves to enable the pressure to be let off gradually before opening the doors. In the case of the locks used for the passage of the men he applies such valves for the admission of air from the mine into the lock, as well as for its discharge therefrom. A large safety-valve arrangement should also be provided, to take effect in case of any sudden or unusual pressure against the locks caused by an explosion or otherwise. The ordinary working of these locks will create a constant creeping movement of the air from the further end of the workings towards the mouth of the mine, and this movement of the air can be increased to any required extent by means of regulating sluice valves, or balanced valves arranged to open automatically under a given or set pressure. Instead of placing the air locks at the entrance to the mine, they may be placed at any convenient part of the workings further into the mine. Or it might be found convenient to work only a portion of the mine under pressure, or one portion under a higher pressure than another, as, for instance, when a higher pressure is required to keep back or regulate an influx of water; in all these cases the air locks already described may be employed. Instead of air locks, the top of the shaft might be covered in with an enclosed chamber, so arranged as to admit the cage, and provided with doors to close the shaft while moving wagons to or from the cage, a small opening being left through this chamber for the rope to pass through. By these means air can be conveyed throughout and to any part of the workings at such pressures and in such proportions as may be required, without the necessity of special air shafts, air roads, bratticing, stoppings, and other complicated workings, at much less cost and with much greater safety to the mine than by the present system. Air can be conveyed to headings and workings places by service pipes from the principal air main, and hose pipes may be coupled up, which can be directed by hand to any particular spot to blow away gas or smoke from a shot; and in case of an explosion or other accident the air can still be supplied to the mine as before. In the case of a fire water can be passed down through the air pipes, and directed against the place on fire, thereby avoiding the necessity of drowning the whole mine, except in extreme cases. One great advantage of the system is that by maintaining a pressure of air in the mine the inflow of water will be in many cases prevented, and in all cases greatly reduced, thereby effecting a considerable saving in the cost of pumping.

SPATHOSE IRON MINING.

Some 12 or 14 years since there was considerable excitement owing to the importation and extensive employment in the manufacture of steel of the Musener Spiegeleisen, and it was thought by many that the steel ores of Siegerland and Styria were alone capable of producing it. As, however, there was a probability of a large demand springing up, efforts were quickly made to find similar ores—spathose ores—in this country, and these were in one or two cases successful. The West of England Spathic Iron and Lead Smelting Company, with a capital of 100,000*l.*, in shares of 5*l.* each, has now been formed to purchase for 40,000*l.* four iron mines and a lead mine, the iron ore raised being spathic; and, according to the analysis of the late Dr. Noad, superior to the steel ores of Siegen and Styria, having a larger percentage of the natural alloy of manganese and iron, and less impurities. It has been found that the spiegeleisen produced is of great tensile strength, and eminently adapted for the manufacture of steel, whilst the increasing demand for steel ensures a ready market for it in its manufactured state. The prospectus mentions that ores of this character are so rare in England that only two iron and steel-making companies in Great Britain possess any, as may be seen by the subjoined evidence extracted from Parliamentary Blue-books and papers. The Ebbw Vale is one and the celebrated Weardale the other; and the ores of this character which they raise do not, according to statistics of sales of iron ore in Great Britain, form more than 1-200th part of the iron ore raised in the United Kingdom.

In 1865 Mr. Henry Bessemer gave evidence before a Committee of the House of Commons to the effect—

Firstly.—That he had personally inspected the Perran lode.

Secondly.—That he was convinced there were millions of tons of spathose ore.

Thirdly.—That it was specially adapted for making Bessemer steel—indeed, that spathic ore was the steel-making ore of all the world, and the only ore used by the ancients for steel making, and that it is still the best steel-making ore known to us.

Fourthly.—That it only wanted railway communication to develope it.

This evidence was given in support of a Bill in Parliament promoted by a Mr. Carter, who had worked at that time on the Perran lode, but only to a very limited extent. Nevertheless, Mr. Carter was convinced from his mining operations that the spathose ores existed in such dense and important masses that, with a view to their special development, he applied to Parliament for powers to construct a line of railway from the Perran Mines to a small neighbouring harbour, to ensure easy shipment of the ores. The panic of 1866 unfortunately paralysed Mr. Carter's efforts, and the mines remained a dead letter until recently.

The evidence given by Mr. Bessemer and Mr. Carter was so very important and decisive that I reproduce it here, as it must dissipate any doubts entertained about the existence of Cornish iron ores in dense masses, and it is impossible to estimate lightly the opinions and judgment of one so eminently practical in Bessemer steel making as Mr. Henry Bessemer, the more especially as Mr. Bessemer's conclusions were based on a personal examination of the mines.

Extracts from evidence given before a Committee of the House of Commons 1865:—

Mr. Edwin Carter, sworn; examined by Mr. Lopes.

Question 372: In the parishes of Bodmin, Lairvat, and Withiel, which are very close to the main line. Will you point out the mines that are there?—Answer: A great many mines of very fine iron ore exist immediately in the neighbourhood, and large quantities can be developed.

Q. 373: Are those mines in a district rich in iron?—A. Very rich indeed.

Q. 374: Do you consider many millions of tons might be extracted?—A. I consider many millions of tons might be extracted from the immediate district; millions of tons of the finest red and brown hematite of a quality not to be excelled by any in the kingdom.

Q. 375: Is it your opinion that the reason that such millions have not been extracted is the want of railway communication?—A. Not altogether; but I mean to say that if there were railway communication, and greater facility of development, the working of these mines would be greatly facilitated. The quality of the iron is only now becoming known.

Q. 388: In St. Columb parish are there also some mines of iron?—A. There are some mines of iron in the parish, and some of tin.

Q. 389: I believe they are not working them at present?—A. No, they are not working the iron mines at present.

Q. 390: Why?—A. I consider the iron to be very good iron, but the preference has been given to the spathose ore and the Perran ore.

Q. 391: Do you think the cost of carriage has anything to do with that not being worked?—A. The cost of carriage has a great deal to do with it; a much lower price could be quoted to the ironmasters. I have found that within the last few months that iron is very much better than was generally supposed.

Q. 402: Is there in view from 40 to 90 feet wide of pure ore?—A. Yes; this is known as the great Perran vein, which is 90 ft. wide; the next point opened, which is about 20 fms. from the cliff, is 60 ft. wide; the next point laid open I cannot give the width; it is very wide. The next is about 80 ft., and the next 40 ft., which is two miles from the coast; at another place, about half a mile from that, it is 80 ft. wide, open to the surface; at another, at 46 fms. deep, it is about 40 ft. wide. The ore is of a very peculiar character, second to none in the kingdom, nor is there indeed anything like it in the kingdom.

Q. 403: Is that the white and grey carbonate?—A. It is the white spathose, or sparry carbonate steel stone, or "stahlstein" of the Germans; it has about 8 per cent. of manganese; very few carbonates in England contain so much.

Q. 404: How much per cent. of iron is produced?—A. About 45 per cent. of iron and 6 per cent. of manganese, and about 8 to 9 ozs. of silver per ton, which very much improves its quality; it is all of that character.

Q. 405: I believe it is the sort of iron best suited for steel purposes—for the Bessemer patent.—A. Yes.

Q. 406: And Mr. Bessemer has been down to Cornwall to look at it?—A. Mr. Bessemer has been there. I hope you will hear Mr. Bessemer himself speak of it before long. (The witness produced several specimens of iron.)

Q. 407: Now, with regard to the quantity; is it unlimited?—A. I was laughed at a great deal for saying that I thought there were from 5,000,000 to 6,000,000 tons of ore under the granite within 20 fms. of the water level; practically, the quantity seems unlimited.

Q. 408: If you had a means of railway communication might large contracts be made?—A. For want of the very communication which we are seeking now to obtain I was unable to make a contract, which would have given me many thousand pounds profit only 12 months since. Mr. Menelaus, the manager of the Dowlais Company, came to me and asked me to supply them. He told me he was much pleased with the ore previously sent, which was something like 10,000 tons, and that he should wish to make a contract for 60,000 tons for the next three years. I was unable to make that contract because I clearly saw there was no means of carrying it out.

Q. 409 (by the Committee): Is that the Dowlais Works?—A. Yes; the Dowlais Works; we are now sending to them. The only contract I made was for 40,000 tons.

Q. 410: Mr. Lopes: You were unable to carry away the material?—A. We were unable to carry away the material; in the first place there was no possibility of getting carts to take it away from the immediate neighbourhood. (The witness withdrew.)

Mr. Henry Bessemer, sworn; examined by Mr. Salisbury.

Q. 513: I need not ask you about your antecedents; your name is sufficient; you are the patentee of what is called the Bessemer's process?—A. I am.

Q. 514: Now, you heard Mr. Carter examined?—A. I did.

Q. 515: Do you know his mine down in Cornwall?—A. I do.

Q. 516: Have you been there to examine the mine?—A. I have been over the whole of his mines?

Q. 517: Did he truly describe that one particular mine to which attention has been called by my learned friend?—A. I think he has quite correctly described it.

Q. 518: Now, is that ore to which the last witness referred well adapted for your purposes?—A. It is specially adapted for our purposes; indeed, the spathose ore is the steel-making ore of all the world; it is almost the only ore that was used by the ancients for steel making, and is still the best steel-making ore known to us.

Q. 519: I suppose that you are very glad to find that it can be got there.—A. Particularly so; I am most desirous to get it.

Q. 520: You know that the Ebbw Vale have the same description of ore?—A. Yes; they have very valuable deposits, and, indeed, they are the only ones in England, with the exception of a very small deposit, I believe, on Exmoor.

Q. 521: I understand you have the good fortune to be a partner in that?—A. Yes.

Q. 522: They have expended a very large amount of capital to get railway accomodation for their works, have they not?—A. I presume, from all I have heard, the value of the mines to them would be about 800,000*l.*

Q. 523: Now, at present most of the ore required for your purpose is imported from Germany?—A. The spathose ore, exclusively so, or rather the spathose iron made from that particular ore.

Q. 524: What do you pay per ton for that particular kind of iron?—A. We have paid as much as 12*l.* per ton; we are getting it from 6*l.* 10*s.* to 7*l.* still, almost twice the price of good English iron.

Q. 525: I suppose that if railway accommodation were obtained through Cornwall, as shown on the map, you would be able to use a considerable quantity of Mr. Carter's ore?—A. Yes, no doubt.

Q. 526: Would it be a great advantage to you and other manufacturers that these mines should be opened up to you?—A. It would certainly be a great advantage to some of the leading manufacturers in the kingdom.

Q. 527: I suppose I may take it that there is no chance at all of bringing it into general use unless railway accommodation be afforded for it.—A. No; the objection to my making arrangements with Mr. Carter two years ago was simply owing to the difficulty of getting the ore to smelt at Liverpool; it was too dear for us.

Q. 528: But this railway, if passed, would enable you to bring the ore from that district?—A. Yes. Cross-examined by Mr. Burke.

Q. 529: Where do you expect to use it?—A. I think Wales would be one of the most convenient places.

Q. 530: Supposing it were carried to New Quay; that takes you right across to Wales, does not it?—A. Yes.

Q. 531: That being the principal place at which you would use this new ore?—A. It is so valuable to have small quantities to mix with other ore that I should think it would be taken to Cumberland, Lancashire, and various other places.

Q. 532: I suppose if it went to Cumberland you would prefer taking it by sea to paying the railway rate.—A. Yes.

Q. 533: Have you investigated these mines yourself?—A. I have.

Q. 534: Do you know the extent of them?—A. I should scarcely say I know the exact extent of them, but I am under the impression that very large quantities of ore exist there.

Q. 535: You are under that impression; but what means have you taken to investigate that?—A. I went over the ground with Mr. Carter and some other gentlemen connected with mining interests, and the general impression which we received from our visits was that there were many millions of tons of iron ore of first-rate character to be obtained from these mines.

Q. 536: How far will this railway be as compared with the branch to New Quay? Which is the mine that you refer to?—A. The Ironstone, near the Great Perran.

Q. 537: Is not that nearer to the existing sanctioned railway leading you to the port of New Quay than this line will be?—A. I do not know very much of railway communication there. I can scarcely answer that point. (The witness withdrew.)

The projected operations at the mines were stopped by the panic of 1866, and it is only quite recently that anything further has been done; but the construction of a railway to the shipping port, the growing demand for steel, and the invention of a special process for reducing the iron ores have now rendered the attainment of success much more easy. The smelting works are to be conducted at Newport, and estimating only 400 tons per week at 1*l.* 7*s.* 8½*d.* per ton profit, there would be an income available for distribution of over 26 per cent. per annum. The new process, which is the invention of Mr. Carter, one of the directors, is based on the first principles of chemistry, and effects an enormous saving in the quantity of fuel used. By a mixture of the different ores and fluxes in certain proportions a perfect amalgamation of the various earths is effected—a point which has been long aimed at, but not as yet attained, by the great ironmasters of the kingdom. Mr. Carter states that the directors believe that by this process iron can be made in three hours, which, under ordinary circumstances, would occupy 36 hours. The prospectus, which will be found in another column, states that it cannot be too strongly urged that this enterprise will not be affected by the present depressed condition of the iron trade. That depression is caused, partly by the diminution of demand for ordinary iron from the general dulness of the trade, but chiefly from the largely extending use of steel for rails, ships bridges, and numerous other works, and for the manufacture of which ordinary iron is unsuitable, but for which the iron made by this company is specially adapted. Mr. I. Lowthian Bell has often expressed an opinion that the age of iron is approaching its end, and that steel will eventually take its place.

WATSON BROTHERS' MINING CIRCULAR.

Ten years ago the weekly information which had previously been published for a great number of years in Watson Brothers' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement; which is now reproduced in consequence of the numerous letters and enquiries handed to them of late in reply to one which appeared in the Journal on the Clementina Mine.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. Watson, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, annually for 21 years, &c., &c. In the Compendium, published in 1843, Mr. Watson was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. Watson Brothers have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. Watson Brothers they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

WATSON BROTHERS,

MINEOWNERS, STOCK AND SHARE DEALERS, &c.

1, ST. MICHAEL'S ALLEY, CORNHILL, LONDON.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. Watson Brothers to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash or for the usual fornightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charges for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in upon the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

We always endeavour to be as correct as we possibly can in our remarks, and it is not often that our veracity is impugned. The secretary of the so-called "Mineral Corporation of Great Britain" has been requested, however, to give the "most emphatic contradiction" to our statement that this French company had tried to get the services of our agent, Capt. Roberts. Our statement was made upon the authority of Capt. Roberts himself. The fact now asserted that in April last he had applied to the French company, even if it had been merely for an appointment as agent, as the secretary would have us wrongly infer, has nothing whatever to do with the question at issue. Capt. Roberts at that time was the manager of the Vale of Conway Mine, and was merely paid 2*l.* 2*s.* per month at D'Eresby Mountain to superintend certain works. In April it became quite clear to him that without further capital the Vale of Conway could not go on, and he was instructed by his then employers, we presume, to offer a large proportion of the unissued shares, or even the whole mine, to the French people. He reminded them that it would make a fine addition to the Hafna, and offered to superintend the whole if they purchased. The negociations were so long delayed that the Vale of Conway became suspended, and Capt. Roberts was appointed agent of our D'Eresby Mountain group. Capt. Roberts then recommended his brother to the French people in case the negociations for the Vale of Conway should eventually be carried out, and on June 19 he received the following letter dated Paris, June 17:—

"Sir,—I have no answer to give you at present concerning the Conway Mine, but hope we will come to some business by time. You propose me in your last letter one of your relations as captain of our mine. What will he require from us as salary by month. And yourself, if we come to an understanding with you *as superintendent*, what would be your request for your monthly salary? Will you kindly answer me to these questions by the return mail.

"(Signed) B. C. de C."

Roberts wrote by return on the 19th (the letter referred to by the secretary), and said if they would kindly appoint his brother (who was a stranger to the district and would want assistance at first), that 10*l.* 10*s.* a month would be his salary, and he would render him any *assistance* that he might require *without charging anything* for himself.

Our readers can now judge for themselves whether or not we were justified in saying what we did, and also estimate the value of the most emphatic contradiction of last week. The matter has no great public interest, but having made our statement on Roberts'

authority, in justice to him we give our authority and his explanation with it. But now we come to Capt. Bennett, or someone who has written for him, and with very questionable taste presumes to correct a mere clerical error in one instance, and what was no error at all in another. We stated that a certain east and west lode crossed the valley at D'Eresby, ran through another sett (Trefriew as it is marked on plan) for 300 fathoms, and then entered Hafna. Capt. Bennett says—"It is true that the lode referred to crosses the Gorse lode in the valley, and runs through another sett for 300 fathoms before it reaches Hafna, but the sett is not called Trefriew, but *Rhuadyrwst*, or some other unpronounceable name." Our error was in a *name*, and not in a *fact*, not knowing the slip of ground by Trefriew was called "Rhuadyrwst." The French company, at the same time they published the announcement (very telling in France, no doubt) that an agent had resigned his appointment at the D'Eresby Mountain to take charge of Hafna, also stated that the "primary object" of the former company had been to cut the Hafna lode. We contradicted this, and named the well-known primary objects of the company. Capt. Bennett's letter is now made to say —"With reference to the Hafna lode in the No. 4 adit in D'Eresby Mountain, I beg to say the tramroad in that level was laid down for the express purpose of working the Hafna lode." This is not correct, and would have nothing to do with the point at issue, even if it were so.

In point of fact, until two of the directors—Mr. Lambe and Mr. Watson—visited the mine several months after the "primary objects" had been going on, not a single man had been placed in the No. 4 adit. These gentlemen saw its importance, ordered it to be cleared, and a tramway to be put down at once primarily for transit of the ores from the upper levels to the dressing-floors, and in doing this work the Gorse lode was discovered by Capt. Bennett.

Such a letter as this of Bennett's, therefore, will neither benefit himself nor his employers. Let us now turn from these personal matters to one more pleasant. D'Eresby Mountain, D'Eresby Consols, and Clementina have now an underground agent in Bennett's place—one who has been manager of lead mines in Wales for thirty years, and during that time we have had occasion to notice, where we have employed him either as permanent or inspecting agent, many instances of his sterling honesty and intelligence, as well as his mining knowledge and experience. Before deciding upon the appointment at D'Eresby, we begged him to go and look at the mines for himself, and see first whether they were such as had been described, and we considered them, and to which he would be justified in devoting his whole time.

He now writes us that he has been underground and examined the three mines, and gladly undertakes the agency of them. "Speaking," he says, "in a general way of what I saw at D'Eresby Mountain—the present productiveness of the lodes and their large and masterly appearance, together with the splendid situation in the mountain side, giving immense backs, and opening out, as it is, with a number of levels one below the other, the conclusion I come to is that the mine is in every sense capable of being made a very great mine, and that in a short time, and with only a moderate outlay."

He also examined D"Eresby Consols adit and the tramway, and points to the Cobbler's lode as one of great interest, and which should have special attention. At Clementina, he says, a good pile of leadstuff has been broken from a shallow stope above adit, and adds, "I like this mine very much indeed."

SATURDAY, AUG. 3.—Market very quiet. Van, 18 to 20; Great Laxey, 18½ to 19½; D'Eresby Mountain, 80 to 90; D'Eresby Consols, 10 to 11; Aberllyn, 10 to 12; Leadhills, 3¼ to 3¼; Roman Gravels, 7½ to 8; South Condurrow, 11 to 11½; South Frances, 3¾ to 4¼; Agar, 3¾ to 4; Peevor, 6 to 6½.

MONDAY, AUG. 5.—Market closed in consequence of Bank Holiday.

TUESDAY, AUG. 6.—Market continues depressed, and scarcely any business doing. Carn Brea, 33 to 35; Dolcoath, 25 to 27; Devon Consols, 2½ to 2¾; Great Laxey, 18½ to 19½; Grogwinion, 2¼ to 3; D'Eresby Mountain, 80 to 90; D'Eresby Consols, 10 to 11; Rookhope Lead, 10s. to 15s.; Roman Gravels, 7½ to 8; Tincroft, 8 to 9; South Frances, 3¾ to 4¼; Van, 18 to 20; West Chiverton, 7½ to 8½; Wye Valley, 1½ to 2; West Wye Valley, 2½ to 3.

WEDNESDAY, AUG. 7—Market again very quiet, and prices about the same as quoted yesterday.

THURSDAY, AUG. 8.—Market inactive, and the following are merely nominal quotations. Devon Great Consols, 2½ to 2¾; Dolcoath, 25 to 27½; D'Eresby Mountain, 80 to 90; D'Eresby Consols, 10 to 11; Aberllyn, 10 to 12; East Van, 4¼ to 4½; Grogwinion, 2½ to 3; Great Laxey, 18½ to 19½; Leadhills, 3¼ to 3¾; Parys Mountain, 7s. to 9s.; Pateley Bridge, 2 to 2½; Pensruthal, 4s. to 6s.; Roman Gravels, 7½ to 8; Rookhope Lead, 10s. to 15s.; South Condurrow, 11 to 11½; South Frances, 3¾ to 4; Tankerville, 3½ to 4; Tincroft, 8 to 9; Van, 18 to 20; West Chiverton, 7½ to 8½; West Tolgus, 52 to 54; Agar, 3½ to 4; Grenville, 1½ to 2; Peevor, 6 to 6½; Wye Valley, 1½ to 2; West Wye Valley, 2¼ to 3; Chontales, 10s. to 12s. 6d.; Eberhardt, 6¾ to 6½; Frontino, 1¾ to 2; Last Chance, ¾ to 1; New Quebrada, 1⅞ to 2⅛; Richmond, 9 to 9½.

FRIDAY, AUG. 9.—Market generally quiet. Rookhope Lead and Pateley Bridge shares in demand; Vans weaker. D'Eresby Mountain, 80 to 90; Great Laxey, 18½ to 19½; Van, 17 to 18; Pateley Bridge, 3 to 4; Rookhope Lead, ⅝ to ⅞; Tankerville, 3½ to 4; South Condurrow, 11 to 11½; Roman Gravels, 7½ to 8; East Van, 4¼ to 4½; West Tolgus, 52 to 54; Devon Great Consols, 2 to 2⅛.

THE WEEK.

SATURDAY, AUG. 3.—Richmonds, which are now quoted ex the 30s. dividends, were rather offered, and declined to 10½. Sellers of New Zealand Kapanga, who have been waiting to get 2*l*., had to be content with 30s., and in some instances less, to-day. Colorado shares could be had below 4*l*. Glenroy, 10s. to 15s.; Rookhope, 9s. to 11s.; Pateley Bridge, 1¾ to 1¾; Parys Mountain, 6s. to 8s.; Great Laxey, 18 to 19; Van, 17½ to 18¼; Roman Gravels, 7¼ to 7¾. A few Bolckow, Vaughan shares fetched 10*l*. premium to-day.

MONDAY.—Bank Holiday.

TUESDAY.—At the commencement Unified were quoted over 52, and for a time is seemed as if the recovery shown on Saturday would be maintained, but early in the afternoon the price receded to 51, and long before the finish anxious "bulls" were made sick by the cry of "50, sellers." At the close the bonds were a shade firmer, being 50, buyers, and 50⅛, sellers. In railways the chief feature was the sudden jump of 1¼ in North British, to 93. The Midland Railway dividend was announced as one of 5 per cent. Malabar, ⅛ to ¼; Colorado, 4 to 4¼; Richmond, 10 to 10¼; Eberhardt, 6¾ to 6¾; Flagstaff, 9s. to 11s.

WEDNESDAY.—The very satisfactory dividend declared by the Midland Railway sent the stock up to 128. British declined to 95¼. Tramway shares were thus quoted to-day:—Argentine, 5¼ to 5⅛; Belfast, 10¼ to 10½; Buenos Ayres, 5⅛ to 5¾; Dublin, 15⅞ to 16⅛; Edinburgh, 17⅛ to 17⅜; Glasgow, 12⅝ to 12⅞; Hull, 16½ to 17; Leeds, 12 to 12½; Liverpool, 13⅞ to 14⅛; London, 13¾ to 13⅝; North Metropolitan, 17⅛ to 17¾; Provincial, 12 to 12¼; Swansea, 9 to 9⅜; Wolverhampton, 11⅛ to 11¾.

THURSDAY.—Pandora: This mine has now been stopped for some considerable time, the underground is choked with water, the dry reservoirs at surface enforcing idleness on the water-wheel. A small steam-engine would have prevented such a difficulty, but one has never been purchased. The Pandora Company is understood to have unissued some 700 shares, yet it has been suggested to raise money on debentures. Liquidation or reconstruction almost invariably follows such a step, and that Pandora is drifting in that direction should by this time be apparent to even one not altogether blind. The millstone theory urged by this correspondent seems to be that having already offices and directors, a change would be a hazardous thing. A drowned and deserted mine doubtless has its attractions to some minds.

The directors themselves, however, have discovered that something must be done, and assistance has been sought from the Mineral Corporation of Great Britain. It has been offered subject to a change being made in the offices, management, and directorate. The principal shareholders are anxious that such an arrangement should be carried out, seeing plainly that it is the only chance of Pandora being preserved to them. Perhaps it is hard that the equanimity of those who spend their time in peering into millstones should be disturbed, and it has indeed been urged that they should be left to their philosophical transactions, so that in a short time the whole mine might be bought by the Mineral Corporation for a less sum than they are now prepared to subscribe; but Pandora is capable of doing justice to its proprietors, and is deserving of a further trial.

FRIDAY (*Opening*).—Markets are firm. Great Eastern are in good demand, and up to 51⅝. Buyers offer 51 for Egyptian Unified. In mining shares there is some enquiry for Colorado, and the price has improved to 4¼. Buyers offer 95⅝ for Richmond. Pateley Bridge are quoted by some at 2¼ to 2½ and by others at 3 to 4, with nothing being done. Llanrwst, 1¾ to 2. Aberdaunant, 5s. to 7s.——*Two o'clock.*—Prices continue good. A large business is being done in Richmond, at prices varying from 9⅜ to 9¾. In Colorado business has been marked at 4⅜, in New Zealand Kapanga at 1½, and in New Quebrada at 1 15-16ths. Van, 17⅛ to 18¼. Great Laxey, 18¾ to 19. West India and Panama, 2¾ to 2⅝. General Credit, 6⅞ to 7⅛. Government Stock Investment, 13⅛ to 15⅝. Railway Share Trust, 6¾ to 7¼.——*Four o'clock.*—Cardiff and Swansea Colliery shares have risen to 1¼, and a great many buying orders have been received during the week. Bilson and Crump are neglected at 3¼, and Chapel House at 3. Unified, after being 51⅛, are now only 50⅛. Turkish Fives have also receded, and most railways are below the morning's level. Glenroy, 10s. to 15s. Parys Mountain, 6s. to 8s. Morfa Du, ¼ to ⅜. Port Phillip, 10s. to 12s. 6d.

FERDINAND R. KIRK.

HOLLOWAY'S OINTMENT AND PILLS.—Diseases and casualties incidental to youth may be safely treated by the use of these excellent medicaments according to the printed directions folded round each pot and box. Nor is this ointment alone applicable to external ailments; conjointly with the pills it exercises the most salutary influence in checking inflammations situated in the interior of the body; when rubbed upon the back and chest it gives the most sensible relief in asthma, bronchitis, pleurisy and threatening consumption. Holloway's remedies are especially serviceable in liver and stomach complaints. For the cure of bad legs all sorts of wounds, sores, and likewise scrofula and scorbutic affections, this ointment produces a cooling and soothing feeling most acceptable to the sufferer.

Original Correspondence.

THE SLATE TRADE OF NORTH WALES.

SIR,—Some fussy, perhaps some interested, correspondent of the Daily News has of late endeavoured to create an impression that the slate trade of North Wales has gone all wrong, that quarries are being closed, and workmen thrown out of employment, and that dulness reigns everywhere. As the paragraph which appeared in that journal of the 1st inst. does not state the facts, and it is calculated to injure the business of those who, like myself, are interested in slate properties, I a few days ago wrote a letter to the editor—which he has not had the grace either to insert or acknowledge—trying to put the matter right. I told him in effect that although the trade is not now so brisk as it had been for a number of years, all the larger quarries are in full swing, some of them with orders on hand to keep them going for more than a year to come, and that there is really no reasonable or just cause for croaking.

It would, of course, be strange if, after almost every other branch of trade had been depressed for several years the slate trade alone should be unaffected, and continue in the extraordinary prosperity which for years had distinguished it from almost every other trade that can be named, until a year ago. It is a fact that although many "duffing" quarries have been brought on the market, and money lost and prejudice created in consequence, the successful slate quarries of North Wales have been and are mines of wealth to their owners. Splendid fortunes have been made, are being made, and will in the future be made out of them. Anybody who knows the history of the Penrhyn, Mr. Assheton Smith's, the Palmerson, and the other large quarries in the Festiniog district, knows that the judicious outlay of capital on good slate quarries has resulted in almost fabulous returns.

The slate trade was good when every other trade, except that of the lawyers and the liquidators, was bad. Standard prices, both at Port Madoc and at Carnarvon, were for several years raised once, twice, sometimes thrice a year, nearly always 10 per cent. at a time. Building operations were being pushed forward rapidly in many parts of the kingdom, and new houses needed roofing. One gentleman, the proprietor of extensive quarries near Dolgelley, told me he could readily sell a hundred times as many slates as his quarries produced. Quarries were opened out in Scotland, South Wales, Devonshire, Cornwall, &c., some of which are doing fairly well. The Americans attempted to compete with us, and failed. The cream of the trade is done in North Wales, and it is here that our friend of the Daily News is anxious to show that we are coming to grief. His fears are groundless. One or two second-rate quarries have been partially and temporarily stopped, not so much from hard times as from disagreement with the men. The one or two quarries are a fleabite to the great slate trade of North Wales. Those quarries are in full operation, and earning enormous profits. The dulness is temporary only, and ere long, ere many months, our prosperity will be pronounced as it was a few months ago.

Temple Club, Aug. 9. E. W. PEARSON.

[For remainder of Original Correspondence see this day's Supplement.]

ENDLESS CHAIN STEAM-ENGINE.

The application of the principle of the chain pump to a steam-engine is unquestionably a novelty, and from the statements of the inventor—Mr. W. C. STILES, of San Francisco—it appears that the application has proved a success. The new engine is, in fact, a Bastier chain pump placed horizontally instead of vertically. At each end of the cylinders is a peculiarly constructed pulley or wheel, around which travels an endless steel belt or chain, which passes through the cylinders, and which is provided with pistons. These wheels are provided with recesses in their rims, which serve the double purpose of providing a seat for the pistons on the endless belt while they are passing around the pulleys, and also for preventing the belt from slipping on the wheels. The endless belt passing around these wheels has pistons attached to it at regular intervals, so constructed and packed that they will fit properly in the cylinders. One cylinder being placed above the other, the action of the steam on one cylinder is in the reverse direction to its action in the other. The cylinders consist of simple tubes, inside of which the piston fits closely, being provided with proper packing to make them steam tight while passing through. At one end of each cylinder is a steam-chest, provided with a cut-off valve and gates. These gates are operated by an automatic sliding-bar, a cam motion being given to the lever from the wheel upon which the belt travels to open the gates of the cylinder at the proper instant to allow the pistons to enter. Just as they enter the gates close behind them, making a steam-tight compartment, and the steam being admitted by the same action, the piston is forced through the cylinder, the other end of which is open, a continuous rotary motion of the pulleys being thus maintained. One piston is going through one cylinder as the other is going through the other in the opposite direction. The pistons are so arranged that one is taking a full head of steam while the other is running on expansive steam. The exit of each piston allows the steam to escape freely, leaving no back action whatever. As the endless belt expands on when heated the slack is taken up automatically by having one of the pulleys set on a sliding carriage.

A trial engine has been running in San Francisco, and given great satisfaction. This engine has two brass cylinders, 5 ft. long by 3¼ in. bore, the pulleys being 3 ft. 3 in. in diameter. The inventor states that this indicates 15-horse power, running 300 ft. per minute, under 100 lbs. of steam. The endless chain is 25 ft. long, and is really a linked piston-rod, passing through suitable stuffing-boxes in the gates. An engine of this class can be moved at any time, there being no heavy bed frame, but simply good strong framework. The inventor proposes to build one with two cylinders, 20 ft. long, 10-in. bore, to run 400 ft. per minute, the whole engine to weigh about 4 tons. Steam may be cut off at any desired point, and allowed to work expansively the rest of the way. By this means the full force of the steam can be utilised, there being no opportunity for any back pressure whatever. By the peculiar construction described a rotary steam-engine is provided in which the full expansive force of the steam can be utilised, and the difficulties heretofore encountered in the practical working of rotary engines are avoided.

With regard to the advantages claimed for the endless chain steam-engine as compared with reciprocating engines the inventor states by way of example that "in a small reciprocating engine of 3 in. to 6 in. bore of cylinder the length is 5, 6, or 8 in., and there is a certain amount of back action every time the pistons got from one end of the cylinder to the other; hence in running the distance of 10 ft. there would be 20 back actions. Now, by taking the lowest back action laid down by the ablest writers, 3 per cent. has been lost every 6 in. run, which in 10 ft. run would amount to just 3 per cent. of the whole power. Every time the piston moves from one end of the cylinder to the other the valve is opened to let the steam in and then closed; the valve to let the steam out is also opened and closed. This requires the moving of these valves twice each time the piston moves 6 in., making or taking power 40 times in 10 ft. There is also loss when cutting off steam in this class of engines, and in the crank motion and power required to run a large flywheel." In the new engine there is no back action of steam. The cylinders may be made of any desired length to 40 ft. and upwards. The power is always given off at full leverage and pound for pound secured, less the friction. The steam ports and gates are moved but four times in going the length of a 10 ft. cylinder, or any length of cylinder, while they are moved 40 times in going that far in a small reciprocating engine, as above referred to. If there are any leaks they may be remedied at once. The steam may be cut off at any point, and works expansively to the end of the cylinder. The exhaust may pass off up the pipe shown in the engraving on top of one end of cylinder, or may exhaust into a case containing the pulley. In marine engines, for which the inventor considers this one specially adapted, heavy bed plates and working beams are done away with, and there is no extra iron and bracing required to strengthen the vessel. The first cost alone would be a great saving, to say nothing of the economy of working.

UTILISATION OF BLAST-FURNACE SLAG.

Although the propositions to utilise blast-furnace slag have been very numerous, comparatively little has been done to introduce it, owing, no doubt, to the circumstance of a different method of handling being necessary, as compared with the materials for which it has been proposed as a substitute. This objection will be to a great extent removed by the invention of Mr. J. S. WETHERED, of New York, who proposes to use it as a road-making material; but after it has been compressed into suitable blocks with other ingredients to form a hard concrete. He claims that the improved concrete may comprise any preferred ingredients in any proportions, so long as furnace slag, limestone, or other calcareous substance and asphalte are employed. An excellent concrete, for example, may be made of 80 parts of furnace slag or limestone suitably crushed or granulated, and 20 parts of asphalte tempered with mineral oil. The proportion of the oil to the asphalte will depend upon the richness of the latter, but in general should be from 8 to 10 per cent. In order that the furnace slag, limestone, or other calcareous matter and asphalte may combine completely, and the latter be absorbed by the former to the fullest extent practicable, it is necessary to heat the calcareous matter to a high degree after it has been suitably crushed or granulated, and before it is mixed with the heated asphalte; and the said invention partly consists in so heating the calcareous matter. The degree of heat should be more than enough to merely effect the drying of the material. It should be sufficient not only to drive off the moisture and carbonic acid which the material contains, but to open the pores and so expand the material as to enable the heated asphalte to readily permeate the substance, and become thoroughly incorporated with it. For heating the calcareous matter an oven of common construction, or an ore roasting furnace, may be employed.

After the crushed furnace slag, limestone, or other calcareous material has been heated, as described, it is, while in its highly heated state, to be mixed with the heated asphalt, and with the other ingredients which are to compose the concrete in any suitable apparatus used for mixing concretes. A horizontal cylinder of iron mounted in bearings, and made to revolve around a shaft furnished with radially projecting arms for mixing the mass, will furnish a simple and effective apparatus for the purpose, and it will be found advantageous to apply heat to said revolving cylinder while the process of tumbling and mixing the material is going on. The concrete having been so prepared, is now in proper condition to be spread as a side walk pavement and rolled smooth.

For paving road beds it is necessary that the concrete material prepared in the same way should be condensed under heavy pressure, while in a mould, into the form of blocks. This operation should be performed while the concrete is still hot, as thereby the block is rendered more homogeneous, and the particles composing it more thoroughly compact. When, however, the block in a highly heated condition is expelled from the mould by the discharging plunger of the compressing machine it often happens that it will crumble, and to avoid this injury time must be allowed for the mass to become set before it is removed. This delay interferes with the economy of the manufacture, and, therefore, this part of the said improved process consists in subjecting the heated block, after it has been moulded and compressed, to the chilling effect of cold water applied to its surface. This treatment is best performed at the instant that the block is raised out of the mould, or as soon as possible after it has been deposited upon the endless apron or conveyor for removing it from the machine. The water may, however, be applied to the block while it still remains in the mould, or the mould itself may be chilled by means of a circulating stream of cold water. The effect of this chilling process is to harden the exterior surface of the moulded block, so that it will preserve its form and integrity during the subsequent handling of it.

Compressed blocks, the material of which has been prepared, and which blocks have been moulded as above described, are not only valuable for paving road beds, but possess great utility as an artificial material for the construction of submarine or exposed sea walls, or for other building purposes. Experiments, too, have shown that compressed blocks of this character can be used for the walls of fortifications with great advantage in comparison with natural stone. They are enabled from their great density to sustain without any greater injury than indentation to a limited extent the impact of heavy projectiles, while their peculiar toughness and slight elasticity prevent injury from splintering or fracturing.

LEAD MINING IN NORTH DEVON.—The Combmartin district in North Devon at one time was celebrated for its lodes of silver-lead ore. The setts have been neglected for many years, but there is now every prospect of large quantities of mineral being taken from the old workings; besides this, there are two or three companies working upon the course of the original lode, with some fair prospects of success.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Aug. 8	Talargoch:—			
	Maesyrewddu	55	£11 9 0	Walker, Parker, and Co.
	Coetia Llys	65	11 6 6	Adam Eyton.
	—North Hendre	100	10 3 6	Walker, Parker, & Co.
	— ditto	100	10 3 6	Adam Eyton.
	— ditto	100	10 3 6	Walker, Parker, & Co.
	—East Pant Du	40	9 5 6	ditto
	—Rhyd Alyn	12	10 1 6	Adam Eyton.
	—Wagstaff	15	9 1 0	Walker, Parker, & Co.
	—True Blue	14	9 11 6	Adam Eyton.
	—Coetia Mawr	8	10 5 6	Sheldon, Bush, and Co.
	—West Tankerville	20	10 6 0	Nevill, Druce, and Co.

HORNACHOS (Silver-Lead).—This company sold on Aug. 7, 21 tons of silver lead ore for 538*l*. 18s. 9d., to Messrs. Nevill, Druce, and Co.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Aug. 9	Talargoch	240	£ 3 11 0	Bagillt Smelting Co.

BLACK TIN.

Date.	Mines.	Tons c. q. lb.	Price per ton.	Amount.	Purchasers.
Aug. 1	Wheal Prussia	10 12 2 17	£6 12 6	£389 8 4	—
7	Wheal Coates	5 1 0 10	36 5 0	183 4 6	Daubuz.

COPPER ORES.

Sampled July 24, and sold at Swansea, Aug. 6.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Spanish Cop.	136	5⅞	£8 5 0	Union	155	12⅝	£7 1 0
ditto	136	5⅞	2 5 0	ditto	155	12⅞	7 1 0
ditto	135	5⅞	2 5 0	ditto	155	13	7 1 6
ditto	135	5⅞	2 11 6	Berehaven	95	11½	6 5 6
ditto	122	6½	2 10 6	ditto	82	8⅜	4 7 0
ditto	122	6¼	2 10 6	ditto	82	8½	4 10 6
Caveira	84	5½	2 3 0	ditto	33	8½	4 9 0
ditto	84	5½	2 1 6	ditto	30	13¾	7 17 6
ditto	84	5½	2 1 6	ditto	20	14¼	8 4 6
ditto	83	5½	2 3 0	Tan-y-Bwich	61	15	7 13 6
ditto	82	5½	2 7 6	Negrillo	59	4½	1 9 0
ditto	81	5½	2 7 6	Copper Reg.	12	33¼	18 3 0
ditto	81	5½	2 7 6	Copper Ore	5	9¾	5 0 6
ditto	81	5½	2 7 6	ditto	1	9	4 3 6
Union	155	12¾	7 1 6				

TOTAL PRODUCE.

Spanish Ore	786	£1879 9 6	Tan-y-Bwich	61	£ 468 3 6
Caveira	668	1479 10 6	Negrillo Ore	59	85 11 0
Union Ore	620	4378 15 0	Copper Regulus	12	217 16 0
Berehaven	349	1871 9 6	Copper Ore	6	29 6 0

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Names.	Tons.	Amount
Copper Miners' Company	217	£ 498 7 6
P. Grenfell and Sons	95	596 2 6
Nevill, Druce, and Co.	94	574 10 0
Vivian and Sons	503½	2,248 17 6
Williams, Foster, and Co.	804	3,674 17 6
Mason and Elkington	245	583 13 6
Sweetland and Co.	394	793 4 0
Landore Copper Company	193½	1,440 8 6
Total	2548	£10,410 1 0

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, August 7: We have fixed a door in the deep adit level a little east of the cross-cut, and are now putting in pipes from the door to the forebreast of the cross-cut, which will be finished in a day or two, when we shall commence driving towards the north lode.

ABERLLYN.—J. Roberts, Aug. 7: We are very busily engaged in putting in the tramway in the deep adit level. We have cleared out the stuff that was in the middle adit, and shall now commence to open on the great blende lode. We should commence directly to make the approach to the incline, so as to get in the rails and open a better ingress to the mine before the winter months set in. We are engaged making a smithy and other necessary buildings.

BETTWS-Y-COED.—H. T. Haley, Aug. 5: Since my last the deep adit end has improved, having a nice leader of spar, mundic, blende, and stones of lead. The shallow adit east is a very strong lode, worth 30 cwts. of lead per fathom. The lode in the adit end west was pinched up small the latter part of last week, but I am pleased to say that it is again opening out well, worth 25 cwts. of lead per fathom, and I am of opinion will quickly become as valuable as before. The winze in the bottom of the adit is going down in a very promising lode, yielding 15 cwts. of lead per fathom; as this winze is going down in advance of the deep adit we may fairly expect good lead in this end quickly. We are getting on well with all our surface work.

BLUE HILLS.—S. Bennetts, P. Bennetts, Aug. 3: There is not much change to notice in either of the points of operation during the past week. The east end, on the top lode, is not quite so productive as last reported, and the winze has slightly improved, so that, on the whole, there is not much alteration.

BODIDRIS.—H. Hotchkiss, August 7: We are making good progress in sinking the new shaft eastward, which is now down about 23 yards. The old sump we discovered enables us to make better speed than we should otherwise have done. The lode in a depth is attained improves in appearance both for lead and blende, and I am in great hopes of discovering another rich run of ore at this point ere long. The 45 east is being pushed on with all speed to meet this shaft and so ventilate a good section of ground. The stope in the 30 is still producing excellent lead, and the stuff we have recently drawn is of a rich character. The lode supposed to be the Maesy proll lode, upon which we are sinking in the bottom of the 10 cross-cut has much improved in appearance during the last few feet sunk. I have no other change to notice this week.

CAMBRIAN MINES.—ESGAIR-FRAITH.—T. Glanville, Aug. 3: Eastern Shaft: The lode in the 70 yard level, west of shaft, is yielding 1 ton of rich copper ore per yard. We are still cross-cutting south into the lode in the eastern part of shaft, which is composed of carbonate of lime and gossan, intermixed with copper and lead ore. The lode in the 46 yard level, west of shaft, is composed of carbonate of lime, with a mixture of copper ore. In the rise above the 46 yard level, east of shaft, the lode is composed of carbonate of lime, gossan, and lead ore, worth for the latter 5*l.* per yard.

ESGAIR-HIR.—We have commenced to drive east on the main part of the lode on the adit cross-cut, and find the lode composed of quartz, intermixed with lead ore. We are now sinking a shaft about 100 yards west of Shaft Goch; the lode is 2 ft. wide, of a most promising character, and contains a rib of solid lead ore, worth at the lowest computation 5*l.* per yard.

COMBMARTIN.—T. Comer, Aug. 8: There is no alteration in the mine worthy of remark since the last report.

CWM DWYFOR.—J. Ridge, Aug. 8: Pensarn Mine: I fully expected we should have got the water out of Morgan's shaft and commenced sinking before now, but it has taken longer than I expected; we have, however, got the water out down to the 10, and I hope to get it all out to-night. I have engaged nine miners, and if all is right below the 10 they will commence sinking to-morrow.

DE BROKE.—J. Phillips, August 7: Sinking in Wilson's shaft has been delayed for a day or two, owing to a breakage of windbore, but it will be replaced by another this evening. The 45 end men have been stoping the back of the level, where the lode is 5 ft. in width, and yields from 15 to 20 cwts. lead ore per fathom; the driving will be resumed as soon as the level is clear of stuff accumulated in the dry season. The appearances in the 25 east are encouraging, the lode being 5 ft. wide, and yielding good saving stuff; this level has already opened up a short but good deposit of new ore ground, which I am having tested at greater depth by short intermediate drifts, and otherwise by cross-cuts. The weather has changed, so that we are drawing, crushing, and dressing with full activity.

D'ERESBY CONSOLS.—J. Roberts, Wm. Sandoe, Aug. 7: The tramway is nearly completed, and we shall commence forthwith to clear out the stuff that has fallen in from the shaft, so as to commence driving on towards the Cobbler's lode. The end on Owen's lode is looking better. There is more quartz, and the lode is larger and mixed with mundic and faces of blende, in addition to a leader of blende on the footwall; price for driving 18*l.* per fathom, by two men. The end driving on the Gorse heading south is much the same as when last reported; set to two men, at 14*l.* per fathom.

D'ERESBY MOUNTAIN.—John Roberts, William Sandoe, Aug. 7: The lode in No. 1 is getting much like it was some weeks ago—a beautiful gossan, with blende and a little lead; it is a fine looking lode, and set to two men, at 5*l.* per fathom. The lode in No. 3 adit is very promising; it is about 1 foot wide, and a very good mixture of lead and blende—set to four men, at 13*l.* per fathom. The stope in No. 4 is looking rather better; this is very important, being the south end of the stope, and, as far as we know, going all into whole ground. In the No. 5 adit we are making better progress, and hope shortly to complete it up to No. 3 shaft. We think when we have completed up to this point that by erecting a horse pulley to draw the stuff it will greatly facilitate the work. We have commenced the reservoir, and shall complete it by the time that the machinery is ready for operation. All other surface work will have the closest attention till all things are ready for working.

DENBIGHSHIRE CONSOLIDATED.—R. Prince, A. Francis, August 8: There are increasing indications of our approach to a lode in the 112 east. Practical miners acquainted with the position of the lode and surrounding country predict that at this point before long we shall make a great discovery. In the driving east from the bottom of the sump in the 66 west we are passing through stuff of a high character. We are not far at this point from the run of ore that is dipping down from the upper level. The tribute pitches look well, yielding very fair quantities of lead ore. The small lot of 10 tons of lead ore has been carted. We have nice piles of stuff on surface.

DEVON GREAT CONSOLS.—Isaac Richards, August 8: Wheal Emma, New Shaft, New South Lode: In the 190 east the lode part carrying 5 ft. wide is composed of very fine capel, quartz, prian, and copper ore worth 1 ton, or 3*l.*, and 5 tons mundic per fathom. In the 190 west the lode maintains its former width (7 ft.) and value—7 tons copper ore, or 20*l.*, and 6 tons mundic per fathom. In the 175 east the lode part carrying 3 ft. wide is composed of capel, quartz, and small quantities of mundic and copper ore. In Floyd's winze in the bottom of the 175 east the lode part carrying 4½ ft. wide is composed of capel and quartz, and worth for length of winze (9 ft.) 4 tons copper ore, or 12*l.*, and 6 tons mundic per fathom. In the 175 west the lode is 3 ft. wide, and worth 4 tons copper ore and 4 tons mundic per fathom. In Hockaday's winze in the bottom of the 175 west the lode is 2½ ft. wide, and worth for length of winze (9 ft.) 3 tons copper ore, or 9*l.*, and 4 tons mundic per fathom. There is no alteration at any of the other points of operation since last advice.

DUBBY SYKE.—Wm. Tallentire, Aug. 2: In the east end we commenced to stope down the vein on Thursday, but we cannot tell yet what ore it will produce; the vein is a good width, composed of barytes (carbonate) mixed with lead ore. Shooting Box level is an important point, which I would recommend being started off at once with four or six men. There is ore underneath the top level which will work by ore bargains, and immediately before this level there is a splendid run of ground, which is well worth trying.

EAST CARADON.—James Kellow, Aug. 7: During the past month Williams's shaft has been sunk by nine men 4 ft.; the ground continues hard elvan. To drive the cross-cut in the 150 north 2 fms. stent, or hole to Williams's shaft, by nine men, at 22*l.* 10*s.* per fm.; it was driven 1 fm. 4 ft.; the ground is similar to that in the shaft adjoining. The stope in the back of the 90, by two men, is yielding 1 ton per fathom. A pitch was set in back of the 80, on Child's lode, to four men, for one or two months, at 13*s.* 4*d.* in 1*l.* No. 2 ditto, in bottom of the 60, on south lode, by two men, at 15*s.* in 1*l.*

EAST VAN.—W. Williams, Aug. 8: The cross-cut from the bottom to Tempest shaft is driven towards the lode 5 ft.

EAST WHEAL LOVELL.—R. Quentrall, August 7: In the additional limits the lode in the south shaft maintains its size and promising appearance; it is now 5 ft. wide, containing pretty much mundic and a little tin throughout—sinking by nine men, at 10*l.* per fathom. In the north shaft the lode is larger than it was, being now 2 ft. wide, and yielding a little tin; sinking by nine men, at 12*l.* per fathom. There is nothing new in any other part of the mine.

GAWTON COPPER.—George Rowe, George Rowe, jun., August 3: The lode in the 117, east of engine shaft, is 5 ft. wide, producing mundic and ore, with an increased quantity of water. The lode in the winze sinking below the 105 east is worth 25*l.* per fathom. The lode in the stope in the back of the 105 is worth 12*l.* per fathom. The part of the lode carried in the winze sinking below the 95 is east is worth 8*l.* per fathom. All other points are without change.

GLASGOW CARADON CONSOLS.—W. Taylor, W. J. Taylor, Aug. 6: We are making fair progress with the sinking of Eliott's shaft, and not much change to notice in the ground. In the 90 east we have holed to the winze sunk from the 78, which has caused good ventilation; the ground here is still rather hard, and the lode not of much value, but we expect it soon to improve east of the winze in a better run of ore ground. In the 90 west we are cutting in north towards the main part of the lode driven on in the 78, and the ground is favourable for driving. The south branch in this lode is worth 6*l.* per fathom; we are also opening on a north branch, worth from 8*l.* to 10*l.* per fathom. In the 78 east we are cutting south through the lode, hoping to find better ground on that side; the lode large, chiefly capel and quartz, with a little ore. The winze in the bottom of this level west is worth 10*l.* per fathom. No other change of importance. The stopes and pitches throughout the mine are about the same value as last reported. The computed quantity of ore for our next sale is 205 tons, which will be sold on Aug. 22.

GLENROY (Lead).—R. Rowe, Aug. 7: We are getting on very well in forking the water, and are now down to the back of the 40 fm. level.

GOGINAN AND LEVEL NEWYDD.—Aug. 7: In the pitch over the 130, east and west of the western shaft, the lode is 9 ft. wide, and worth 13 cwts. of ore per fathom. In the pitch over the 120, 35 fms. west of Bryn Pica shaft, the lode is 8 ft. wide, yielding 18 cwts. of ore per fathom; nearly worked out. Also over the 110 fm. level, 16 fathoms east of the western shaft, the lode is 5 ft. wide, worth 9 cwts. of ore per fathom. In the pitch over and below the same level, 65 fms. west of Bryn Pica shaft, the lode yields 15 cwts. to the ton of ore per fathom over the level, and in the bottom 12 cwts. per fathom. In the pitch over the 120 fm. level, 10 fms. east of the western shaft, the lode produces 11 cwts. of ore per fm. In the pitch over the 100 fm. level, 10 fms. west of western shaft, the lode is worth 13 cwts. of ore per fathom. In the pitch over the 100 fm. level, 12 fms. east of the western shaft, the lode is 6 ft. wide, yielding 12 cwts. of ore per fathom. In the pitch over the same level, 20 fms. west of Taylor's shaft, the lode produces ¼ ton of ore per fathom. In the pitch over the 60 fm. level, 15 fathoms west of Taylor's shaft, the lode yields 11 cwts. of ore per fathom. In the pitch over the 60 fm. level, 30 fms. east of Taylor's shaft, the lode is worth ¼ ton of ore per fathom. The water in our reservoirs is getting down very low, but we have had some heavy rains lately, which we hope will give us a good supply of water again.

GORSEDD.—W. Edwards, August 8: The shaft is completed below the 20, so that we hope now to make great progress in opening up the mine both east and west. Since my last the men have drawn some splendid stuff from the western level, and I am led to look for further improvement.

GREAT LAXEY.—W. H. Rowe, Aug. 7: Deep Mine: The Welsh shaft has been sunk deep enough for a new level, and a driving commenced northward; the lode continues the same as recently reported, but we expect it to improve as the driving advances. The 235 end north is now getting clear of the slide, and the lode regaining its strength and value. There is no noticeable change in the stopes above this level since last report. The 220 end, as we expected, is improving, and worth at present 25*l.* per fathom; we have increased the force here in order to hole it sooner to the winze, which is still about 10 fms. distant. The stopes above this and the 210 are about their usual value.—Dumbell's: This shaft is now nearly deep enough for a new level, and it is satisfactory to be able to report a further improvement in the the 215 end north; now worth fully 45*l.* per fathom. The 185 end continues in good ore, worth fully as last reported. After cutting through the slide in the 170 end north, we have thought it best to cross-cut quite through the lode, but have not reached the hanging-wall; lode so far worth 40*l.* per fathom. No other change to notice in this direction. The 125 cross-cut east has cut into disturbed ground comparatively, from which we infer a change is close at hand. The 110 end still continues very promising; the lode, however, is not so good for ore just now. The 85 cross-cut is now getting pretty nearly over the line of stopes in roof of the 110.

GREEN HURTH.—W. Vipond, August 2: The fourth branch, west of No. 1 cross vein, does not present a very promising appearance; it looks as if it will not go very far; it is yielding about 6 cwts. of ore per fathom. The branch east of No. 1 cross vein is still yielding 10 cwts. of ore per fathom. We have just begun with the new working below adit; there is payable ore where they have begun, but there is too little done yet to judge of its value. I have put two men to some ore at the entrance to Fire Away cross-cut, worth at present 6 cwts. per fathom. There is no change in No. 3 cross vein or in the cutting out for new sump top. Water is still very scarce. The open-cut near pumping-shaft is now about 4 fms. from the vein or branch.

HARWOOD.—W. Tallentire, Aug. 2: Herdship Level: The south end working is being rapidly pushed foward with four men, the vein is looking better, yielding from 14 to 16 cwts. of lead ore per fathom. We have 12 bings of lead ore ready for sale.

HINGSTON DOWN CONSOLS.—Thomas Richards, August 7: Bailey's Shaft: In the 172 east the lode is in a disordered state, and for the present it does not contain enough ore to value. The stope in the back of the 172 east continues to be a good course of ore, and is worth fully 20*l.* per fathom. In the 160 west we have intersected a cross-course, which is letting out much water; the lode up to this point is exceedingly promising, producing about 5*l.* worth of ore per fathom. In the tributers' sink in the bottom of the 160 there is no important change. In the stope and pitch in the back of the 110 the lode has a very promising appearance. In the deep adit the ground continues moderately easy, and fair progress is being made.

KIT HILL TUNNELL.—H. Bennett, Aug. 8: The men are making fair progress in driving the both ends of the tunnel, but there is no change to notice at any point.

LADYWELL.—Arthur Waters, Aug. 8: The rise in the back of the 16, south of new shaft, is in a soft lode 7 ft. wide, producing stones of lead ore varying in weight from 2 to 2½ cwts., worth 15 cwts. per fathom. The lode in the adit south, and in the 20, north of new shaft, without change since last reported on. We hope to have the new shaft, at present in very hard ground, holed to the 16 by the end of the present week. In the four tribute pitches at work the men are getting fair wages at 5*s.* per ton of lead.

LIVINGSTONE CONSOLS.—Wm. Vivian, Aug. 8: In the 40, driving on the Wheal Kitty lode, west of shaft, we are now making good progress; driving at 8*l.* per fathom; lode from 4 to 5 ft. wide, producing rich stones of tin and copper ore. By pushing the level on I have no doubt that good and profitable ground will be met with.

MARKE VALLEY.—W. George, J. Stenlake, Aug. 8: The lode in the 90 end, driving west, is 2½ ft. wide, and for some time past has a most promising appearance, yielding good stones of copper ore and mundic, but not quite sufficient to value. The lode in the 30 end west is 2 ft. wide, yielding some saving work; the ground is a little more favourable for driving than we have had it for some months past; with this change, and the favourable character of the lode, we are expecting soon to enter a run of more profitable ground. The lode in the 10 west is 2 ft. wide, yielding 1½ ton of good quality ore per fathom. In the rise in the back of this level the lode has not been taken down since our setting report was written, up to that time it yielded 3 tons, or for length of rise, 2 fathoms, 6 tons of ore per fathom. There is no change to notice in either of the pitches or bargains since our last report.

MELLANEAR.—John Gilbert, Aug. 7: The lode in the 40, west of the rise west of the skip-shaft, is 2 ft. wide, and producing some very good stones of copper ore. The lode in the 100, east of Gundry's shaft, is 4 ft. wide, and worth 1 ton of ore per fathom. We have not done much in this end for the past week, as the men have been employed in casing and dividing the shaft below the 90, and we expect to get the whim kibble to draw from the 100 by the end of this week. We shall then cut plat and resume the driving of the 100 east as quickly as possible. The lode in the 90, west of shaft, is 5 ft. wide, and producing good stones of copper and lead ores. The lode in the 80, west of shaft, is 4 ft. wide, and worth 2½ tons of ore per fathom. The lode in the 70, west of shaft, is 4 ft. wide, and worth 2 tons of ore per fathom. This is a very promising looking lode. The lode in the 60, west of shaft, is 4 ft. wide, and worth 3 tons of ore per fathom. The lode in the winze in the bottom of this level is worth 2 tons of ore per fathom. This winze is now down about 11 fms., and we expect to communicate to the 70 in the early part of next week. The lode in the rise in the back of this level is worth 2½ tons of ore per fm. The lode in the 50, west of shaft, is 3 ft. wide, and worth 1½ ton of ore per fm. The lode in the 40, west of No. 2 rise, is 4 ft. wide, and worth 4 tons of ore per fm. The lode in the rise in back of this level is 5 ft. wide, and worth 3½ tons of ore per fm., and some saving work for blende. We have met with occasional patches of elvan in the 30 cross cut, south of Gundry's shaft, but the ground is still very good for driving. The lode in the 100, west of the skip shaft, is 3 feet wide, producing good stones of copper ore and mundic, and is letting out a good deal of water. All our machinery and pitwork are going on very satisfactorily, and the water underground is still decreasing. The old engine is now going only about six strokes per minute, and Gundry's three strokes per minute.

MINERAL CORPORATION OF GREAT BRITAIN (HAFNA MINE).—W. Bennetts, Aug. 7: We have cleared and secured No. 1 adit level about 35 fathoms, and I am glad to inform you that in clearing this level we have discovered a great deal of lead ground that will pay well for stoping. I will send to the office on Friday a box of lead that we have broken from the ground that I have referred to. We shall urge on the clearing of this level as fast as possible, so as to get it cleared to the end. The lode in the rise in the back of the tramway adit level has very much improved in the past day or so. It is now worth 1 ton of lead per fathom, and is as pretty a lode as anyone can wish to see.—No. 4 Deep Adit: The men are making good progress in driving the cross-cut. We have completed the repairing of the water-wheel and crusher, and put it in good order for crushing.

MONYDD GORDDU.—James G. Green, Aug. 7: We still require rain to enable us to work our pumps; in consequence I have no news to report from the mine this week. The dressing floors are completed, and we are now finishing the new water-wheel and connections.

MORFA DU.—T. Mitchell, Aug. 8: I am glad to be enabled to report a change taking place in the bottom end here. The ground is getting more favourable for driving, and we have just cut a strong feed of water. This looks encouraging, and we hope soon to intersect the lode.

NEW BRONFLOYD.—Thomas Kemp, Aug. 8: No. 3 Shaft, North Lode: Six men to drive the 121 end, west of winze on the main part of the lode, at 12*l.* 12*s.* per fathom; lode worth from 30 to 35 cwts. of lead ore per fathom, and the ground extremely hard for opening. Ten men to stope over this level to the east of winze and back towards the shaft, at 5*l.* per fathom; lode worth 25 cwts. of ore per fm. The tribute pitch over the 110, east of winze, is relet to eight men at 7*l.* 10*s.* per ton; lode worth 15 cwts. of ore per cubic fathom. The pitch over the 62, east of shaft, is also relet to six men at 8*l.* per ton; the lode here is very wide, containing a mixture of ore throughout, which will, I think, pay for taking away.—Middle Lode: Four men to drive the 73 end, west of Curtis's cross-cut, at 20*s.* per fm., which includes the removal of stuff; the part of the lode carried by the driving is of the same composition as for some time past—composed of killas, spar, carrying nice strings of ore, and is letting out more water. I consider our prospects here are of a very favourable description, and I hope shortly to be in a position to report that a good discovery has been made. Two men to drive the 52 end, east of No. 2 shaft, at 18*s.* per fathom, which includes the removal of stuff; the lode is principally composed of killas and spar, intermixed with a little ore. Four men to sink a winze in the bottom of this level, at 220*s.* per fm.; the men are to have 3*l.* for cutting tackle plat, &c.; the value of the lode shall be given in our next report. The pitch over this level is refused at the price offered—7*l.* 10*s.* per ton, and will stand in abeyance until the price of ore is advanced. The pitch over the 40, east of shaft, is relet to four men, at 18*s.* per ton; lode worth 15 cwts. of ore per fathom. Two men to cross-cut south in the adit east of shaft, at 30*s.* per fathom, which includes the removal of stuff. We have cut into the main part of the lode at this point about 6 ft., which is worth about 10 cwts. of ore per fathom, and no sign of the footwall. Owing to the very dry weather we have experienced here of late our surface water has been very limited, consequently we are getting on but slowly with our dressing; however, the best is being done under the present circumstances. Machinery in good working order.

PARYS MOUNTAIN.—T. Mitchell, August 8: The 90 cross-cut south is looking much the same as when last reported; good progress continues to be made in the driving.

PATELEY BRIDGE.—Chas. Williams, Aug. 8: In presenting you my monthly report I am very much gratified in being able to congratulate the shareholders upon the fine discovery of lead ore recently made in the 30 east, on Rake vein, as predicted in my report of July 4 last. The mass of mineral to-day is 4 ft. wide, of solid galena, worth fully 10 tons per fathom. This point is being worked by eight men, at 100*s.* per fathom. The vein in the stope in the back of the 30 is 6 ft. wide, and worth 3 tons of lead ore per fathom. The vein in No. 2 stope in back of ditto, 20 fms. east of engine shaft, is 4 ft. wide, and worth 16 cwts. of lead ore per fm.; set to six men, for the month, at 5*l.* 12*s.* 6*d.* per ton for dressed ore. The tribute pitch in the 20 east, on Rake vein is worth 1 ton of lead ore per fathom; set to two men, at 5*l.* 12*s.* 6*d.* per ton for dressed ore.

The tribute pitch in Fielding's vein in the 20 north-west is worth 14 cwts. of lead ore per fathom; set to four men, at 6*l.* 5*s.* per ton for dressed ore. The tribute pitch in string in the 20 west is worth 15 cwts. of lead ore per fathom; set to four men for the month, at 6*l.* per ton for dressed ore. The produce for July amounts to 50 tons of lead ore, worth 500*l.*, at a cost of 330*l.* Our last sale of pig-lead (July 31) realised 320*l.* 6*s.* 3*d.* We have nearly 100 tons of lead ore on hand dressed, which is now being smelted.

PENHALLS.—S. Bennetts, P. Vian, Aug. 3: The lode in the 70 east is of a promising character, and worth 5*l.* to 6*l.* per fathom. On the same section of the lode west it is worth 7*l.* per fathom. A cross cut south at this level has just cut the gossan, south of which we expect to find the section of lode and tin ground below the 60. There is not any change to notice in either the 60 or 55 east ends. The 45 west is worth 7*l.* per fathom.

PENNANT.—Aug. 8: We are making fair progress in the driving on the bottom level. The 80 west has continued to improve since my last report, and we have drawn therefrom to-day some good rocks of lead ore. The stopes are looking quite as well as they have done for some time past, and the dressing is proceeding satisfactorily.

ROMAN GRAVELS.—Arthur Waters, Aug. 8: The 110 south is going forward in a strong fine lode, worth at present 1¼ ton of ore per fathom. The same level north is worth ¾ ton per fathom. The winze in the 95 north is not yet drained by the 110, and the water having rather increased this week the sinking is suspended for the time. The 95, south of shaft, is worth 3¼ tons per fathom. The five stopes in the back of the 95, north of new engine-shaft, are worth together 9 tons per fathom. The 80 south is at present up to a narrow part of the lode, the present value being 2 tons per fathom. A similar twitch to this occurred in the 65, at a corresponding point, previous to the coming in of a wide and rich lode. The six stopes in back of the 80, north and south of said shaft, are worth together 12 tons per fathom. The 65 south, on the east part of the lode, is worth 1 ton per fathom. The five stopes in back of the said level, south of Stokes' winze, are worth together 11 tons per fathom. The 40, south of Stokes' winze, looks like getting through the twitch, the lode now being 9 in. wide, and yielding small pieces of lead ore. The three stopes in bottom of the 40, north and south of new winze, are worth together 3 tons per fathom. The stope in back of the 80 east lode is worth 1¼ ton per fathom. Surface work going on favourably.

ROOKHOPE.—Thos. Davidson, Aug. 8: Adit Level: We have been delayed a few days in our best workings here by a heavy burst down from adit level roof, but I am glad to say we commenced working again on Wednesday morning. The stoping west from old rise, No. 13 section, continues splendid, yielding good stones of ore, and about the same value as reported last week—2½ to 3 tons. The other end east from same rise is only poor at present; the cause of this is, in my opinion, that something coming in about the rise has thrown this side up a little, so that in consequence we are not quite so high up in the sill; but I have little doubt when we get higher we shall have good ore here too. In one respect it is better we are lower at this end, as the sills dip down eastward, which will enable us to command it better. In the rise in back of the No. 11 section west we are commencing to drive east towards the end where the good ore is, and the vein and mineral look better as we proceed; at present its value is from 8 cwts. to 10 cwts. per fathom.—Over 42 Fm. Level: The workings down winze No. 3 and 4, on section east of low shaft, are about the same as previously reported. In one working where the vein is about 4 fms. in width we had a break down yesterday, but will be able to put it in order to-day again. I am thinking of removing four men from here, having too many concentrated at one point. In new rise east of Gin shaft, on No. 4 section, we have been working some good ore of the level side, but it is now poor at both ends, so I have ordered the men to rise up further. We are timbering and sheeting up the foremost rise to go up under the winze from the 25, when our next point will be to fill up all open ground, so as to put us into a condition for going upwards. We have had an increase of water. Have stopped the ironstone dam, so that the others have caught all the extra, and none has gone past the dressing floors.

SAINT PATRICK.—William Francis, Aug. 7: In the 120 yard cross-cut north I am glad to report that we have cut a fine joint, running east and west on the east side of the cross course, from 6 to 7 in. wide. I have thought it better to push forward before making any trial on it, as I fully believe we have a large master vein before us, and that it will prove rich. The 90 yard cross cut in the chert measures progresses satisfactorily; there is no material alteration, however, since last week.

SOUTH DARREN.—Henry James, Aug. 8: Since my report last week we have had a breakage to the engine, which has caused the water to rise up again to the 100. We expect to have it in fork again to-night. The 100 end, west from winze, is suspended for a short time, and the men put to drive east, to effect a communication with shaft as soon as possible; this end is in very stiff and close ground. The lode in the winze sinking below the 90 is producing 2½ tons of lead ore per fathom. The lode in the 90 end will be stripped down next week; from its present appearance, we have a strong and masterly lode before us. No. 1 stope, in the roof of this level, is worth 2½ tons per fathom. No. 2 stope is worth 1½ ton per fathom. The 80 end is in easy ground for driving, but is unproductive for ore. No. 1 stope, in the back of this level, is worth 1 ton per fathom. No. 2 stope is worth ½ ton per fathom. The winze in this level is down 5½ fms., sinking in hard ground. The weather is very dry, and water scarce for dressing, &c.

SOUTH DE ERESBY MOUNTAIN.—T. Bennetts, Aug. 7: No. 1 adit level cross-cut, on No. 2 lode, is improving every foot driven. We have broken some good lumps of solid lead from the lode to-day similar to the box of lead which was taken from the shaft, and sent to the office a short time ago.—New Shaft: The part of the lode that we are sinking on is looking well for lead and blende. No. 2 adit end, driving on No. 1 lode towards the engine-shaft, is also improving as we drive north—a splendid lode.

SOUTH MOLTON CONSOLS.—T. Harris, T. May, Aug. 8: Our men are making very fair progress with their drivage, considering the stiff ground we are passing through, being runs of bastard limestone and quartzose slate, in which we find good spots of yellow copper ore. We are hoping to pass through this hard ran shortly, when we expect to make better progress.

SOUTH ROMAN GRAVELS.—Aug. 8: I have just been underground, and find that a change has taken place in the end driving north since I saw it last; the ground is a little easier, and the branch or lode (I feel convinced now it is the latter) has widened to quite 18 in., composed of a little clay-slate and carbonate of lime; there is also a deal more water issuing from it. The end is set the month, at 6*l.* per fathom.

TANKERVILLE.—Arthur Waters, August 8: Setting Report: The 208 to drive east of Watson's engine-shaft, by six men, at 14*l.* per fm.—a strong good-looking lode, worth at present 1¼ ton of lead ore per fathom. The 208 to drive west of shaft, by six men, at 13*l.* 10*s.* per fathom, worth 1 ton per fathom. No. 1 winze in the 192, east of shaft, by nine men, at 15*l.* 10*s.* per fathom, lode worth 2 tons per fathom. No. 2 winze in same level, east of the above, by six men, at 15*l.* per fathom, lode worth 2 tons per fathom. The 192 to go west of shaft, by four men, at 11*l.* 10*s.* per fathom, lode worth 1 ton per fathom. The rise in this level, just behind the end, by six men, at 11*l.* per fathom, lode worth 2½ tons per fathom. There are six stopes in back of the 192, east and west of shaft, set to 22 men, at 6*l.* per fathom each, worth together 6¾ tons per fathom. A stope in bottom of the 120 west, by four men, at 5*l.* 1*s.* per fathom, worth ¾ ton per fathom. The 120 pioneer level to drive west, by four men, at 11*l.* per fathom, lode worth ½ ton per fathom. The 92 to drive east, on one of the lodes of the old mine, by two men, at 6*l.* per fathom, lode yielding good stones of lead ore, and improving. The winze below the 62, on south lode, by four men, at 11*l.* per fathom, present value 1½ ton. There are nine pitches set to 18 men, at tributes varying from 5*l.* 10*s.* to 6*l.* per ton of dressed ore. We delivered 50 tons of the last sale of lead ore up to last evening, the remainder to follow.

TEMPLE.—Aug. 8: With the exception of a continuation of the progressive improvement in the No. 3 level there is no important alteration in the mining department. The surface operations are progressing rapidly. The water-course, upon which 22 men are engaged, will be completed at an early date. The masons are building the wheel-pit, and cutting foundations for the crushing-mill and house. The quarrymen are raising stone for the various building purposes, and the engineer will commence delivering the machinery on the mine next week. All the different works are progressing to the satisfaction of the agents.

TOLGUS CONSOLS.—W. C. Vivian, Aug. 8: The appearances to-day in the 40 cross-cut are much the same as they were yesterday, the rock being highly metalliferous. The lode cannot now be far ahead.

TRELEIGH WOOD.—William Goldsworthy, August 8: The men are making fair progress in sinking the winze below the 44; lode much the same as last reported, or 16*l.* per fathom. There is no change to notice in the rise; lode worth about 5*l.* per fathom. I have set the 34 west to two men, at 4*l.* 10*s.* per fathom; lode worth 5*l.* per fathom, and from the present appearance we hope to get as good a lode as we have a few fathoms behind us, where the stuff was worth 15 per cent. produce. The pitches are not looking quite so well, but as the lode is subject to these changes I look for an improvement very soon. The machinery is in good trim, and working well.

TYN-Y-FRON.—T. P. Thomas, August 2: Having, in company with Captain Absalom Francis, carefully inspected this mine, I can only say that after 40 years' experience and inspection of almost every mine of note in England, Wales, Ireland, and the Isle of Man, I have never seen so wide and mineralised a lode before, and as to attempting to put a value upon ore ground 90 ft. and 24 ft. wide, it would be absurd, but having purchased and paid for the machinery, plant, materials, &c., at Cae Gynon, I hope soon to be able to commence the dressing, which will soon show us the correct value of the lodes. At our annual meeting, which will soon take place, our statement of expenditure for the working underground and the purchase of machinery and surface operations will show the difference between practical management and London directors and theoretical management.

— E. Jones, Aug. 6: We are continuing stripping down the sides and squaring the adit level east of the adit cross-cut, on the north lode, and we find it improving in strength and value, both the lead and blende, and where mixed the lead increasing every foot it deepens. We are going through a large body of ore ground, which can be commenced stoping as soon as our tramroad is ready to take it away. As soon as we have finished the squaring we will begin the cross-cut north suggested by Captain Francis and Mr. Thomas on Friday last. The mason from Goginon has promised to be at Cae Gynon to morrow, to take instructions as to the repairing of the dressing-floors, which shall be proceeded with as quickly as possible, as also the repairs necessary to the crushing-wheel.

WEST CWMYSTWITH.—J. Davis, Aug. 3: The winze is down nearly 9 fms., and in another week's time I expect it will be down the required depth to drive on the course of the lode. The best part of the lode is now standing on the south of the winze. The cross-cut from No. 2 to 3 lode is being continued on the branch referred to before, and has not yet reached No. 3 lode. The men working on Fleming lode were inconvenienced with the removal of the stuff, and I put them to drive the intermediate level shown on plan annexed, and where I am glad to say we have at present a very good lode containing 3 in. to 4 in. of solid ore, and some good mixture. If this continues to extend westward it will open up a considerable extent of ore ground, as the ground above and below has not been worked away. The ground in dog adit has changed for the better, and is letting out water very freely, which is an indication that the lode is not very far off. With this report I send you a plan of the Pensafte old workings, which are now cleared and secured. The old workings from A to B are very old, very small, and are in a branch lode, which appears to have contained some good bunches of ore. In the modern workings, which are marked B C, D F, B C, is a cross cut which at C intersects a fine lode about 4 ft. wide. Some parts of this lode have been worked away both over and under the level, which is a proof that it was productive; in fact, from C to D there is a good mixture of ore to be seen now. With, perhaps, the exception of No. 2 lode on the other side of the property this is the best lode on the sett, and now that the workings have been put in thorough repair the exploration of it should be continued on the line D G. If the lode in the intermediate level holds out as at present, and also the lode at the bottom of the winze westward proves of equal value to what it is a few fathoms higher up, the company will in future be in a position to keep its dressing machinery more regularly at work.

WEST GODOLPHIN.—J. Pope, Aug. 7: The 80, driving north towards Wilson's lode, is progressing a little faster than what it did in the granite. There are several small branches in the level, the largest about 6 in. wide, and good work for tin. The other places are looking just as they have been for some time past, with the exception of the copper, which is not so much, scarcely any in the 70. I will send you full report in time for the committee meeting on Tuesday next.

WEST TANKERVILLE.—A. Waters, Aug. 8: No material change in the prospects of the mine has occurred since the date of my report, which was read at the general meeting the other day. Our setting list for August is as follows:—The 86 to drive south of boundary shaft by four men, at 8*l.* per fathom; lode 4½ ft. wide, worth 25 cwts. lead ore per fathom. No. 1 stope in back of said level, south of the winze, by two men, at 4*l.* per fathom; worth ¾ ton per fathom. No. 2 stope south by four men, at 4*l.* per fathom, worth 12 to 15 cwts. per fathom. No. 3 stope south by four men, at 4*l.* per fathom, worth 1 ton per fathom. The rise in the 75, on east or footwall part of the lode, by two men, at 4*l.* per fathom; lode worth ¾ ton per fathom. The stope in back of the said level, on west part of the lode, by six men, at 5*l.* 10*s.* per fathom; worth 1½ ton per fathom. The winze in the 63, 15 fms. south of shaft, by four men, at 6*l.* per fathom; lode worth 25 cwts. per fathom. There is a considerable piece of whole ground standing in the 75, north of the above winze, which we hope will pay for stoping when properly cut up into sections. We have to-day sold 20 tons of lead ore, realising 206*l.*

WEST WHEAL TOLGUS.—Aug. 7: The lode in the north end in the 145 west is 5 ft. wide, yielding about the same quantity of ore as when smaller—3 tons of ore per fathom. The lode in the same level west on the south part continued to yield about 5 tons of ore per fathom until we holed to the second cross-cut, which was done yesterday. The lode west of the cross-cut is not so good as to the east of it; we estimate it will yield 3 tons of ore per fathom. The lode in the 135 end

west is 18 in. wide, yielding stones of ore, and ground improving for driving. There is no alteration in the value of the stopes in this level. The lode in the 125 end west is small and poor. There is no alteration in the ground in Richard's shaft, nor in the 75 end west. The lode in the 65 end west is 1 ft. wide, with plenty of mundic. We are pleased to see the lode getting larger, although poor, it being so small only just dividing the ground for a great many fathoms in length it almost made us doubt if we were on the course of the lode or not, but it is now clear that we have the right, or we may say the only lode.

WHEAL AGAR.—E. Moyle, Wm. Hambly, Aug. 6: Setting Report: During the last four weeks the engine-shaft has been sunk 1 fm. 4 ft. 3 in., and now down 8 fms. 2 ft. below the 205. We hope to sink to the 215 this month; set to 12 men, at 46*l.* per fathom. The 205, driving east on Waddington's lode, has been driven 1 fm. 3 ft. 4 in.; the greater part of the lode is standing south of the end, and as far as seen worth 10*l.* per fathom. The north part is disordered, but being easier for driving and the most direct course to the new shaft we recommend the drivage on this part to reach the point under the new shaft as quickly as possible; set to six men, at 19*l.* per fathom. The stope or sump winze north of the engine-shaft, on Waddington's lode, still maintains its size and value; set to 27 men, at 20*l.* per fathom to sink, and 9*s.* 6*d.* per ton for stoping. The 185 rise, north of the engine-shaft, has gone up 1 fm. 4 ft. 9 in.; set to two men, at 4*l.* per fathom. The 120, driving east of engine-shaft, has been cleared 20 fms.; set to two men, at 6*s.* per fathom. The rise above the 80 has been holed. The new shaft has been sunk 1 fm. 1 ft., and is now down 7 fms. 1 ft. below the 35 fm. level; set to three men, at 12*l.* per fathom.

WHEAL CREBOR.—J. Andrews, Aug. 6: In the 120 east no lode has been taken down for the week. The lode in No. 1 stope, in the back of the 120, is 4 ft. wide, and worth 8*l.* per fathom. The lode in No. 2 stope, in the back of the same level, is 5 ft. wide, and worth 12*l.* per fathom. All other points are without change.

WHEAL GRENVILLE.—T. Hodge, Aug. 6: Goold's shaft is going down with fair speed; it is now 6 fms. below the 150, on the old lode. We are daily expecting to intersect the flat lode. The 140 east end is worth 10*l.* per fathom. The 140 west end is worth 6*l.* per fathom.—Western Shaft: The lode in the 160 trip plat produces stamping work. The 160 east end is worth 6*l.* per fathom. The lode in the 150 east end just now is small, and of little value; but from the appearance of the surrounding rock I think that the lode will open out again. The 140 east end is worth 8*l.* per fathom. The 130 west end is worth 10*l.* per fathom. The stopes, on the whole, are without any particular change to notice. We have now 72 heads of stamps at work, and the engine drives them with the greatest ease.

WHEAL NEWTON.—H. Bennett, Aug. 8: All our points of operation remain without any change since last report.

WHEAL UNY.—Wm. Rich, M. Rogers, Aug. 5: The lode in the 172, west of Hiad's shaft, is worth 8*l.* per fathom. We intend soon to begin to fix skip road in this shaft. The 160 end west is worth 7*l.* per fathom. The 160, east of Goodinge's, is unproductive. The 150, west of incline, is worth 7*l.* per fathom. The 150 east is worth 8*l.* per fathom. The rise in the back of the 150 east is worth 10*l.* per fathom.

WHEAL PRUSSIA.—Wm. Tregay, Aug. 8: The mine is opening well at all points. We sold on Thursday, Aug. 1, 10 tons 12 cwts. 2 qrs. 17 lbs. of black tin, at 36*l.* 12*s.* 6*d.* per ton, realising 389*l.* 8*s.* 4*d.*, the produce of a fortnight. Our next sale takes place on Wednesday, Aug. 14.

EAST CHIVERTON MINE—SPECIAL REPORT.

Redruth, July 26.—Having in accordance with your request inspected the above mine, I beg to send you the following as my report thereon. This mine, as you are no doubt aware, adjoins and is immediately to the east of the celebrated West Chiverton Mine, which has for the last 25 years or more been returning such large quantities of silver-lead ore as to enable dividends being paid to the shareholders amounting to 55*l.* per share. The engine-shaft is sunk to the 74; at this depth a cross-cut has been driven 8 fms. south, where the lode is cut and a level driven west of the cross-cut about 70 fms., the lode in the present end producing 2 tons of silver-lead ore per fathom—a most promising lode indeed—and, judging by its character, I shall be very much surprised and disappointed if this lode does not improve in value in the next few fathoms driving, for the ground in this level is very congenial for bearing lead, being a light-blue clay-slate, precisely the same as in the western mine.

In the 64 a cross-cut is being driven south to cut West Chiverton south lode; this cross-cut is driven about 40 fms. from the shaft, and I think, probably in a few fathoms further driving, will cut the lode which made so much riches in West Chiverton. The shallower levels there is no occasion to comment upon beyond saying that at every level reached the lode has unmistakably improved in depth, which was the case in the adjoining mine down to the 110 or 120 fm. levels. East Chiverton has now reached a most important point, and I think the discovery just made in the 74 west, with the great probability of cutting a good lode in the 64 south cross-cut, warrants further developments in this western part especially, which I strongly recommend, and after driving the 74 fm. level a few fathoms further my advice is to go up and bring down the old boundary shaft on the 74 fm. level end; this will give good ventilation for working the mine further west, the shaft is already sunk to the 40, and by putting up a rise in the back of the 74, at the same time sinking below the 40, you will quickly effect a communication, and lay open the most important part of the mine. I have no fault to find whatever with the management of the mine, for, as far as that is concerned, I may say it is all that I could wish; had the mine been my own I should carry out the working as is now being done. I may add that this is not the first time I have inspected East Chiverton, but I never before saw anything so encouraging in the mine as I have witnessed on this inspection.—WILLIAM NANCARROW.

THE VICTOR LEAD MINE—MONTHLY REPORT.

August 6.—The engine-shaft is being sunk below the 55 fm. level on the course of the lode, present depth about 4 fms.; the ground is rather harder than it has been, a patch of limestone having come into the shaft from the eastern side; this will, however, soon wear out, as the lode is underlying east, and we are consequently nearing the footwall as depth is attained. Owing to the immense width of the lode, I do not expect to reach the footwall until we are deep enough for the 65 fm. level. In sinking we meet with occasional lumps of ore, but as the main ore-bearing part of the lode is on the footwall there is no certainty of a regular yield of lead until the footwall is reached, but at the same time we may find bunches of ore in the shaft as we sink. This point is being urged on as fast as possible, it being our mainstay for future discoveries. The 55 fm. level has been driven north during the month about 5 fms, the lode gradually improving in appearance since we left the shale, and as we have only about 5 fms. further to drive to get so far north as the 45 end, we shall soon be in an entirely unexplored piece of ground, and, seeing that is unwrought to the surface, our prospects of finding an east and west vein are very good. The strings of ore which are to be seen in the old workings to the west will, I expect, be more concentrated and productive at this depth. You have already been made aware of our having had to suspend operations in the sump in the 55 north, owing to the water being too much to contend with until drained by the engine-shaft. I was very unwilling to leave off trying to sink, as it was from here we were getting our sales of ore. You will, however, be pleased to hear that the last stem we worked in the bottom we had splendid leadstuff, and you will readily see from this that we have the prospect of a good course of ore in the 65 fm. level. I have placed the men who were in the sump to drive west on a lode in the 55 fm. level north (this driving commences immediately at the sump top). We have about 2 fms. yet to drive to reach the main footwall of the great north and south lode, and should the east and west lode on which we are driving continue its strength and bearing after getting away from the north and south lode it will be likely to prove the most important discovery ever made in the mine, as it is just where the old Bryn Celyn lode should be found. At any rate, I shall be in a position by the end of this month to speak with certainty respecting it. In stripping down a piece of lode in the side of the 45 north about a fortnight since we opened into a nice branch of lead, worth 1¼ ton per fathom. On continuing to work it it has proved bunchy. We are now sinking a sump on it, and are down about 3 fms. below the level, and the present bottom is in a very fine-looking lode, composed of clay and lime spar, with lumps of lead here and there over 1 cwt. each, but not regular in the produce, though from its promising nature I expect it will again improve. In concluding this report, permit me to say that the cutting of the water in the rich sump has alone prevented me from continuing monthly sales, and I am confident I shall soon be able to make up for lost time when we reach the ore ground in the 65.—H. B. VERCOE.

FOREIGN MINES.

DON PEDRO.—The Mine Captain's report, under date July 10: The ore has been derived from No. 8 new shoot below adit level, and same shoot south side openings, southward and Alice's West, and from level east and west from rise put up from No. 1 stope, No. 8 new shoot below adit level, and from No. 8 old shoot, Bawden's cross-cut, north ground. The ore, though still ruling of low standard, yet a slight improvement is perceptible in the quality of the ore.—No. 8 New Shoot: No. 1 stope east below adit level is still in crushed ground, and branches of the lode are disordered by the same. The ore in the No. 3 stope east below adit level is improving, though slightly, and we hope that progress here will be better, as we are now getting away from the old timber. The branches in No. 4 stope east are becoming more settled and regular, the ground being still somewhat crushed requires careful handling. Progress in the south side openings from western stopes ultimately has been fair; the lode, though bunchy and irregular, on the whole has produced moderate quality ore; this is being stoped with head boards and props. The branches in Alice's West continue small and irregular, and progress slow.—Rise put up from No. 1 stope east, No. 8 new shoot below adit level: The branches in the level southward continue small, but of fair quality; in consequence of the heat here we shall prosecute the rise to endeavour to hole for ventilation to No. 5 shoot, new level.—No. 8 old shoot Bawden's cross-cut, north ground, No. 1 stope east: The lode here retains its size, but is still of low quality. A little necessary repairs have been made in the incline west from Bawden's cross-cut to Bryant's as the timber was crushing badly. The stope opened south from this incline continues in hard ground, and progress slow; branches of lode so far are small and of inferior quality. All other points in Bawden's stopes being idle, the force required elsewhere.

Prospective and Running Work: Sump Shaft: One set in and all back laths of second set, the two sets making the depth below the 35 fm. level 10 fms. 5 ft. Had the wheel given us no trouble we should have progressed fairly, but, taking into consideration the delays attendant on the repairs and changing of bolts in flange joints, progress is satisfactory. The ground in the sump continues hard.—Incline Shaft: Three sets put in above the 35 fm. plat, consisting of three legs and two caps each set. The lode in No. 5 shoot, new level, continues its enormous size and good appearance, but is still unproductive. Progress here is slow in consequence of the dilatory means of egress of debris. Strong efforts are being made to hole to rise, which will not only ventilate this and the rise, but also have a fair means of egress of ore or debris. At Nos. 1 and 3 stopes below adit level three sets and two props have been put in No. 3 incline to support the roof. Bawden's stopes have been propped and reprieved, and pillars of timber built for supporting the back wall. Bryant's cross-cut is still in hand. The 60-ft. wheel has been idle in all 17½ hours, to put on some wood and iron work to strengthen the flange joints and tighten bolts, &c. This is not yet completed. All other parts of the machinery continue to work splendidly. We changed bucket of drawing-lift six times, packed plunger-pole once, &c., wedged rolls, changed one roll, and everything in the mine connected with this has kept in good working order.

PITANGUI (Gold).—T. S. Treloar, Pitangui, June 29: The drivage of the adit during June amounted to 9 fms. 1 ft. The adit continued to be in picarra, but the formation was firmer, thus requiring more blasting and less timbering than when first met with. Total distance to which the adit had been driven from the mouth of the same to June 29 was 125 fms. 3 ft.

RICHMOND CONSOLIDATED.—Telegram from the mine at Eureka, Nevada: Week's run, $56,000, from 900 tons of ore. Doré bars from refinery, $55,000.

— R. Rickard, July 17: There is no material change in the developments at the mine since my last. The drift from the winze in the bottom of the 200 drift is in very hard ground. No. 4 chamber is not looking quite so well as it was; the ore in the upper part of the stope is narrow, and the grade is not so high as it was. No. 9 chamber it without change; the ore, although narrow, is of high grade. No. 5 chamber is also without change. No. 7 chamber has improved since my last; there is a very fine breast of good ore. No. 10 chamber has also improved, and is opening out a very good chamber of ore. The drifting of the 400 on the quartzite has been resumed. The 500, on quartzite, is without change; the same level, on fissure, is looking more promising for ore; at present there are 6 inches of ledge matter and galena. The winze on the fissure below the 500 is without change; favourable ground for sinking, with very good indications. The 600 west drift is in hard ground, consequently slow progress is being made. All other parts of the mine are without change to notice. The furnaces are smelting the usual quantity of ore daily.

LAST CHANCE.—Telegram from the Chairman at the mines: The machinery will commence working on the 10th inst. All progressing satisfactorily.

GOLD RUN.—J. A. Stone, July 18: My last to you was on the 19th ult., since which I have completed the run I was then making, cleaned up, and on the 16th cabled you the result. The unusually large expense attached to the run was caused by exploding the blast over the incline, which necessarily filled it to a great depth over the top, and had to be opened from the bottom, and, as I anticipated, proved slow and expensive. The actual washing time was 21 days, the result of which was far better than I had anticipated. The gold obtained from the last clean-up was much heavier than that obtained from former runs, showing that the bottom is improving as we get opened. I have powder drifts nearly completed for another blast towards Potato Ravine, but the water season is nearly over, and I have stopped washing until another season. The Cedar Creek water will not last longer than the 1st proximo. I am also informed that the South Yuba ditch will not run water here later. Should I attempt to make another run this season it would be so short that the expense of cleaning up and replacing the blocks would eat up all the profits; not only that, it would leave the mine in such a condition that the necessary preparations for next season could not be made.

I am expecting to enter into an agreement with the Miners Ditch Company to supply them with water to drive their machinery (the Cedar Creek will have enough water all the year for this purpose), and they to furnish me with compressed air to drive a Burleigh stoping drill, with which I can blast down my present bed-rock cuts, and also drive the tunnel ahead on the "lead" about 200 feet very cheaply. I can rent at a small expense the Burleigh drill of the Cedar Creek Company. If I drive the tunnel I shall make it only 5 ft. wide by 6 ft. high, and on a grade of about 10 in. to 12 ft. This tunnel will not require sluice boxes, and will be beneficial in grinding the cement and saving gold. I shall also run powder drifts ahead, so as not to be retarded in bottom washing next season. By this method I shall be able to make good progress on the bottom, and it will give room to put in a mill, and crush the hard rich cement and bed-rock. When I get the mint returns I will forward my accounts, &c.

PESTARENA UNITED (Gold).—Aug. 2: The returns of gold for the month of July are as follows:—From Val Toppa district, 191 ozs. 13 dwts. 17 grs., from 526 metric tons of ore; yield per ton, 7 dwts. 7 grs. From the Pestarena district, 347 ozs. 1 dwt. 6 grs., from 352 metric tons; yield per ton, 19 dwts. 17 grs.: total from the two districts, 538 ozs. 19 dwts. 23 grs., from 878 metric tons of ore amalgamated; average yield per ton, 12 dwts. 6½ grs per ton.

MINERAL HILL.—Mr. Plummer, July 17: Giant and Star Mines: The ore in the roof of the Star is looking a little better than usual, but the ore body in the western portion of the Giant Mine has given out. We are obliged for convenience in working to let the ore and waste remain as broken for the time being.—Troy Winze: During the past week we have been driving south from the bottom of this winze under the Troy and Star chambers. The quartz has not changed in any particular since my last.

COLORADO UNITED.—Aug. 7: The superintendent's advices, dated July 18, to hand, enclose plan of the lower workings of the Terrible Mine. He states that the mineral in the bottom of the 7th level, and also in the 8th level, is looking as well as previously reported. Stope No. 2, in the 8th level, is the best stope in the mine. We have opened up 30 fms of this ground, and have in places over 6 in. of splendid mineral, and nowhere less than 3 in., and the stope is looking better every day. The contractors in the 8th level have to-day finished their contract to a point directly under winze No. 2, at $10 per foot, and I have let a further contract from winze No. 2 to the silver-ore shaft at $8 50 c. per foot. I have no fear that when we start in to stope No. 3 we shall have a block of ground not inferior to stope No. 2. Union Tunnel is in 600 ft., and about 30 ft. from the breast we cut through a small vein of mineral, which from its dip is without doubt the Tuscorora. We put a drill (two men) on yesterday, and it is already looking very fairly.

Union Tunnel stope, west of the Old Terrible ground, is looking very well, the mineral not so irony, and of much better quality; we have fully 4 in. in the east end and 2 in. in the west end. Silver Ore shaft, sinking on the same body of mineral, is looking as well as ever, and 6 in. wide.—Brown Mine: In an old winze in the east end of this mine I have taken out some mineral, which on July 12 assayed as high as 1645 ozs. silver to the ton of 2000 lbs. I have put men to work there, and to-day there are 4 in. of mineral in the drift east of this winze.—Oneida Mine: There are 6 in. of 500-oz. ore at the bottom of the shaft, only 45 ft. down from the surface.

PONTIGBAUD.—Aug 1: Roure: The sinking of the engine-shaft below the 175 goes on regularly, but the rock is rather harder than it was last month. The 175 metre cross-cut has intersected the lode, which, as far as it is seen, produces good stones of ore. The 150 metre level south yields ½ ton of ore per current metre. The same level north yields stones of ore irregularly. The rise in the back of this level is unproductive. The 100 cross-cut east continues in stiff rock. The cross-cut at the same level west from the shaft has met with a split of the lode on which we have set to sink, with the intention of holing it to the 150 rise for the ventilation of the lower levels. The 80 metre level, south on Virginie's lode, produces a little saving work irregularly. The same level north yields ¼ ton of ore per current metre. The 60, in the same direction, yields ½ ton of ore per current metre. The 40 metre level north opens ground worth ¾ ton of ore per current metre. The cross-cut at this level, east of mill-shaft, continues in sparry ground, consequently our progress is slow. The 20 ends, both north and south of cross-cut on the eastern part, are without change, and opening tribute ground of low value. The mill adit north on the caunter lode yields a little saving work. The shallow adit, north from Virginie's workings, yields ¼ ton of ore per current metre.—Mioche: There is no change worthy of notice since last month.

La Brousse: We have set to rise above the 140 metre level towards the new engine-shaft; the rock is rather hard. In the 120 south we have set to undercut the lode, to its full width, where it promises to yield well. The 100 metre level south of air shaft continues in a strong lode, yielding a little coarse saving work irregularly. The 80 metre level south is being driven on a regular but unproductive lode. The 60 metre level south on the eastern part of the lode is unproductive. The engine-shaft is completed 44 metres below this level, and we hope to finish it to the 120 metre level in about two months from this time. The adit level west continues in favourable ground.—Pranal: The 110 metre level north of St. George's shaft is unproductive. The same level south yields a little low quality saving work. The rise in the back of the 90 north has been holed to the 70, and driving has been resumed; the lode presents a kindly appearance, but yields no ore to value. The 90 metre level south of junction, on the eastern part of the lode, yields ¼ ton of ore per current metre. No. 1 winze below this level, just over the 110 south, yields ½ ton of ore per current metre. The 90 south of winze yields ½ ton of ore per current metre. The sinking of the above-named winze below the 90 is unproductive. The 70 metre level north yields ½ ton of ore per current metre. The lode in the same level south is unproductive. The 50 metre level south yields ¼ ton of ore per current metre. The winze in the same level north yields also about ¼ ton of ore per current metre. Throughout the mines we have, as is usual at this season of the year, suffered in the production of ore, owing to the absence of our workpeople about the hay and corn harvest, which will be brought to a close in a few days, when all will be resumed with its usual regularity. Our samplings have amounted to 231 tons.

FOREIGN MINING AND METALLURGY.

In the Haute-Marne (France) the ironworks are kept going with some difficulty, orders not being at all numerous. Working operations are carried on with little animation, but prices have been fairly sustained, and probably for the reason that they could not well go lower. The stock taking which has been carried on of late has been almost everywhere attended with negative results, and producers have decided to restrict the make rather than to reduce the prices; some of them would probably stop altogether if they had not the hope of better times. Chain iron has been greatly depressed; for lots of from half a ton and upwards abatements would be made from the published quotations. In the Meurthe-et-Moselle pig has been somewhat in demand, and producers show little disposition to enter into contracts for periods extending beyond the present year.

In the French coal trade the great strike at the Anzin Collieries may be said to have terminated, although at the Blanzy-Horne, Thiers, and Bonnepart pits the men have not all resumed work. At the Aniche Company's mines, where the strike did not prevail with much severity, all the men are now at work. The men who lately went on strike obtained, it would appear, only one concession from their employers—this was the re-establishment of working operations on Mondays. The discussion of any further questions at issue was refused by the employers until orderly labour was resumed at all points. At the same time a promise was given that these questions should be fairly dealt with eventually. The state of the French coal markets has remained generally the same. At Paris there has been scarcely anything doing; in the Nord strikes have checked the few transactions usually remarked at this period of the year. The orders which have been given out have emanated principally from the proprietors of sugar works. In the Loire many contracts are being renewed, and fresh arrangements which are being made have given a certain tone to prices.

A fresh contract for trucks and horse-boxes is about to be let by the Administration of the Belgian State Railways. At a recent adjudication for the sale of old *matériel* from the State network the offers made ranged from 3*l.* 8*s.* to 3*l.* 9*s.* per ton. An international congress of civil engineers is to be held at the Palace of the Trocadero, Paris, from Aug. 5 to Aug. 15. There will be nine sittings of the Congress altogether, and one of them is to be devoted to mines and metallurgy. The St. Leonard Construction Company at Liége has just received an order for three steam motors for tramways; they are to be used on the Uccle-les-Bruxelles line, which is to be completely worked by steam. The Society of Engineers educated at the Liége School have just visited, among other metallurgical works, the rolling-mills of the Sclessin Company. Two things have especially interested the visitors—first, the Louth differential trio, which has just been applied to one of the trains for plates, and which yields excellent results; and, secondly, an American appliance for polishing hot iron,

The Belgian coal trade has presented scarcely any change. The annual excursion of the Society of Engineers educated at the Liége School has been the principal event of the week. The Collard Pit, which was visited by the excursionists, has now attained a depth of about 1700 ft. The pit has a drainage engine of 215-horse power, which raises 100 cubic metres of water per hour with a reasonably moderate consumption of coal. Hazard Colliery and other workings were also visited.

A continued improvement in the Belgian iron trade is reported from Charleroi. A slight advance of prices has been established in regard to several specialties—notably rolled sheet-iron. An advance of casting iron prices is expected shortly. There is an improvement in the demand for small coal, and prospects for the trade generally are considered better.

The production of crude iron in the Rhenish-Westphalian works during the second quarter of this year shows a marked increase against the corresponding period last year. According to official statistics of the Dortmund district, the out-turn of pig-iron in the period in question this year was 3,181,650 cwts., against 2,729,304 cwts.; crude rails, 2,205,280 cwts., against 1,826,770 cwts.; Bessemer cast-steel blocks, 2,096,792 cwts., against 1,902,437 cwts.; and Siemens Martin cast-steel blocks, 245,366 cwts., against 213,481 cwts. The increase was, therefore, 14·2 per cent. crude iron, 17·2 per cent. crude rails, 9·3 per cent. Bessemer steel, and 12·1 per cent. Siemens-Martin steel. These figures are worth noticing in connection with the repeated complaints in Germany as to the necessity of reducing production in consequence of foreign competition.

AN AUSTRALIAN GOLD FIELD.

As I think a true account of what an Australian gold field is like may be interesting, I will try to show you—although so far away—our little township of Mount Egerton, as fair an example of a bush gold village as any in the colony of Victoria. I may mention two mines—the Egerton (or Learmonth) and Black Horse United; but besides these there are several smaller ones, where hard work is being done to discover the colour of the precious metal, but as yet without success. As the manner of underground working and manipulating the gold is precisely the same in all quartz mines, a description of the former will suffice for both. And first I must mention the difference between the two great sources of gold, the alluvial and quartz digging. The alluvial was far more common in early days than now, as it required no expensive machinery, and the gold was, as the colonial expression goes, sticking out on the surface. This was the time when nuggets were found waiting to be dug up from a few feet below the surface, but that supply has failed; and now miners have to rely upon deep sinking on the chance of striking an auriferous quartz reef: a more tedious, hazardous, and expensive method. The quartz is dark-looking hard opaque stone, sometimes crystallised, but generally amorphous, and showing on the broken surface small pin's head specks of gold. The Egerton Company employs nearly 200 men, these being divided into three bands, each band of men working eight hours a day, which time is called a shift, the three shifts making up the 24 hours, for there is no stoppage of work from midnight on Sunday till 11 on Saturday night.

There are three shafts from the surface, and from each shaft six drives of a quarter of a mile in length run at right angles. The miners are taken up and down in a large iron cage, worked by means of a winding engine at the mouth of each shaft. A stranger venturing below is supplied in the engine room with a pair of mud-stained trousers, a jumper, a sou'-wester, and a candle. It is usual not to go below No. 5 level. On landing he follows the drive as far as it is extended, and there comes upon the men at work. A great deal of the stone is got by the pick, but drilling and blasting with gun-cotton or dynamite have to be resorted to in the lower levels. The broken stone is put down shoots, so that the stone from above comes to the lower level, where it is caught in small trucks and taken back to the cage at the mouth of the drive, and by that raised to the surface. On reaching the surface the truck-load is emptied into a large wagon, which, when full of stone, is drawn by a horse about a quarter of a mile to the battery, where, if we follow it, we shall see the process it goes through before the gold is got in its pure state. The wagon having reached the battery is tipped up, and the stone falls down other shoots which bring it to the stamps. There are at the Egerton Battery 48 head of stamps each weighing about ½ cwt., and these pound and pound the quartz until nothing is left but fine powder. As this is going on a continual flow of water passes over it, washing the fine sand into lockers, where it is received on trays placed one over the other, with perforated sides, and containing quicksilver in the bottom. The loose gold is quickly acted upon by the mercury, and an amalgam is formed, water still carrying away the sand and the gold not formed into amalgam. From the lockers inclined planes run covered with blankets spread over with amalgam containing more quicksilver than gold, and over this the sand still is carried by the water, and all the remaining gold caught, before the sand, or tailings as it is now called, is given over to Chinamen, who, by cradling and washing, can make about 10*l.* a week from it. On Friday mornings these lockers are opened and the blankets are scraped, the amalgam being collected on wash-leather. The superfluous quicksilver is squeezed through the pores of the chamois leather, and a hard, solid mass of amalgam is left behind, containing nearly 50 per cent. of gold. This lump of amalgam is now put in a crucible, from the lid of which a long tube passes into a bucket of cold water. The crucible is put in the furnace, and by this means the quicksilver comes off in fumes and condenses in the cold water, the pure mass of smelted gold remaining behind. The gold is now melted again, and when molten is poured into moulds, and is, when cold, the bar gold which is sent home to England.

The yield of gold at the Learmonth averages from 300 to 350 ozs. a week, that at the Black Horse about 180, making the grand total of 530 ozs. coming from the small township of Egerton every week. The price of gold is about 4*l.* per ounce, so that, putting the expenses at half the proceeds—for miners' wages are very high (from 2*l.* to 2*l.* 10*s.* per week)—there is still a very considerable surplus for the directors and shareholders, who have many reasons to be proud of their connection with the two great gold mines of Mount Egerton, Victoria.

BRIEF HISTORY OF THE SUTRO TUNNEL ENTERPRISE.—Ground was broken for the Sutro Tunnel on Oct. 19, 1869. The work has, therefore, required eight years eight months and ten days to complete. The progress was very slow at first, all drilling having been by hand; but in the spring of 1874 experiments with a Burleigh drill having demonstrated the advantages to be derived from the use of that machine, a carriage capable of supporting six of those drills while at work was made, and on June 22, 1874, four were started. The progress was now much more rapid than ever before in the history of tunnelling in the world, and on Aug. 7, in the same year, two more drills were put to work. This made six altogether. From that date the average progress was over 300 ft. per month up to April, 1877, when the header having entered the broad Comstock mineral belt, the heat became so intense that two drills had to be taken off the carriage. From that day the average monthly progress did not exceed 250 ft. Work has been continued uninterruptedly from the time that ground was broken, but at times only two men were at work in the tunnel. The greatest progress was in December, 1875, when the header was advanced 417 ft., and the least in October, 1870, when it was only advanced 19 ft. The total length of the tunnel, is 20,170 ft. The tunnel being connected with the Comstock workings, the next move of Mr. Sutro will doubtless be

to start north and south drifts to connect with all the mines on the lode. The work has cost nearly $4,000,000.
— *Virginia Chronicle.*

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The Mining Market: Prices of Metals, Ores, &c.

METAL MARKET—LONDON, AUG. 9, 1878.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde..	2 10 0-	—
,, Scotch, all No. 1 ...	2 10 0-	3 10 0
Bars, Welsh, f.o.b. Wales	5 2 6-	5 5 0
,, ,, in London.	5 15 0-	—
,, Stafford., ,, .	6 15 0-	7 10 0
,, in Tyne or Tees ...	5 5 0-	5 10 0
,, Swedish, London ..	9 5 0-	9 10 0
Rails, Welsh, at works..	4 15 0-	5 0 0
Sheets, Staff., in London	8 5 0-	—
Plates, ship., in London	6 15 0-	—
Hoops, Staff.	7 10 0-	—
Nail rods, Staff. in Lon.	6 5 0-	6 15 0
STEEL.		
English, spring 13	10 0-19	0 0
,, cast 30	0 0-40	0 0
Swedish, keg.....14	0 0-	—
,, fag. ham. 15	0 0-	—
LEAD.		
English, pig, common ..16	12 6-	6 15 0
,, ,, L.B.....17	0 0-	—
,, ,, W.B. 17	10 0-	—
,, sheet and bar..18	0 0-	—
,, pipe.....18	10 0-	—
,, red 19	0 0-	—
,, white 24	5 0-26	0 0
,, patent shot ...21	0 0-	—
Spanish 16	7 6-	—
NICKEL.		
Metal, per cwt. 18	0 0-20	0 0
Ore, 10 per cent. per ton.24	0 0-26	0 0
QUICKSILVER.		
Flasks of 75 lbs., ware.	7 0 0-	—
SPELTER.		
Silesian	18 0 0-	—
English, Swansea	18 15 0-	—
Sheet zinc	21 10 0-	22 10 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	64 0 0	64 10 0
,, bars ,, ...	65 0 0-	65 10 0
,, refined.....	67 0 0-	—
Australian	60 15 0-	61 0 0
Banca	62 0 0-	—
Straits	60 15 0-	61 0 0
COPPER.		
Tough cake and ingot.	67 0 0-	68 0 0
Best selected	68 0 0-	69 0 0
Sheets and sheathing .	72 0 0-	—
Flat Bottoms	75 0 0-	—
Wallaroo	71 15 0-	—
Burra, or P.C.C.	70 0 0-	—
Other brands	64 0 0-	66 0 0
Chili bars, g.o.b.....	61 5 0-	(nom.)
PHOSPHOR BRONZE.		
Bearing metal	£112	0 0
Other alloys	£120 0 0-	140 0 0
BRASS.		
Wire	7½d.-	8d.
Tubes.....	7½	— —
Sheets	8¼	- 8¾
Yel. met. sheath. & sheets.	6	- 7
Nails composition.....	8¼	- 9

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Charcoal, 1st quality ...	1 0 0-	1 2 0
,, 2nd quality ...	0 19 0-	1 0 0
Coke, 1st quality	0 16 0-	—
,, 2nd quality	0 14 6-	0 16 0
Black .....per ton	16 0 0-	16 10 0
Canada, Staff. or Gla., at Liverpool	11 10 0-	12 0 0
Black Taggers, 450 of 14 × 10	30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 6s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—The fear of war has not passed away with the proclamation of Peace, and this is one of the reasons why business does not improve, but how is it that these apprehensions still exist, and that commerce remains in the same depressed state as before? The explanation is simple, but at the same time it would perhaps be interesting to give a short review of the various circumstances in connection with the war and its settlement, not with the object of giving expression to political sentiment, but for the sole purpose of ascertaining to what extent commerce is thereby affected, and likely to be influenced. In relation to our own market, there are undoubted records extant of the evil effects produced, therefore few, if any, will be disposed to dispute the fact. Complaints have been loud for a long time past of the bad state of trade both in regard to its limitation and the percentage of profit attached to it, but the grievance has not ended here, it would be well if it had done so, for it has gone many steps beyond, and occasioned tremendous losses to those who have been forced to realise; nevertheless the past misfortunes and disappointments would soon be forgotten if future prospects were only of a more cheerful character, but unfortunately they are not generally considered reassuring, and fears are beginning to be entertained lest the continued strain may prove too much, and ultimately result in a commercial crisis. The depreciation is already great, and although not wholly past recovery, yet it is partly and entirely so for a considerable time to come, and much time must elapse before higher prices can be permanently established, and it is a question for holders to determine as to whether it would not be more prudent to take their loss at once, and thus terminate their liability rather than hold out any longer in the mere hope of doing better, and perhaps increase their risks immensely.

It is only necessary to point to the enormous stocks in confirmation of our statement, and allowing that there are some who can afford to wait for a more propitious season yet there are very many who are not able to do so, and to whom any further decline in market prices would be serious, and possibly ruinous. During the recent hostilities between Russia and Turkey it was often thought that England might have to take an active part in the war, and these rumours constantly exercised a prejudicial effect upon trade, and were partly instrumental in bringing our markets into a weak and unhealthy condition. Now, that being the case, and the war ended, it is perfectly incomprehensible to those who only regard things superficially why trade does not immediately improve, and prices recover. The cause in their opinion being removed ought to act as sufficient stimulus to an increased demand to promote more animated markets; but instead of these anticipations being realised there is no increase, but actual decrease; no rise, but a positive fall. But the difficulties should not be underestimated, for they are well nigh insurmountable, and it is only with the greatest care and vigilance that a collapse can be avoided, and we feel so engrossed in the future welfare of our markets that we can scarcely take a retrospect of past events; nevertheless, as the doubtful and alarming turn of political affairs has ended to the injury of our markets and trade generally we cannot pass them by altogether unnoticed.

It is not for us to say here what the effects of a war might have been if it had taken place, but we know what the effect the fear of war has produced, and oftentimes it is said that anticipations are worse than realities, but we certainly have to thank some of the leaders of the Liberal party for agitating the country and exciting apprehensions of war. They have not helped to mend matters, but only embarrassed the Government, who would, no doubt, have made a firm stand had it not been for them and for two of its members appearing to shirk the responsibility at the last moment, and causing it afterwards to pursue a vacillating policy. Yet when the Salisbury despatch was published, and it was seen what a deep impression it had made all over Europe, and what general approval it had been met with everywhere, Englishmen felt proud of the document, and were hopeful of a definite solution and a permanent peace, but the Government seemed to have stopped short here, and been satisfied by entering a protest upon paper. The Berlin Treaty, the Schouvaloff agreement, and the Anglo Turkish convention are fresh in our memories, and various are the opinions formed of them, but nearly all agree in coming to one conclusion, that the arrangement is merely temporary and provisional, and that fresh responsibilities are incurred. The secrecy and mystery, whether justifiable or not, is distasteful and objectionable. The Liberal party having almost forced the Government to patch up peace at any price it is scarcely decent of them to criticise the terms too closely, but the Government had no right to pander to the Opposition, even though they had in a measure succeeded in dividing the country, but if peace could not be procured on lasting and satisfactory terms none other ought to have been entered into. It would have been better to have had no peace than to have one patched up, which will tend to keep our markets in a perpetual state of suspense for the future.

The state of uncertainty from which we have been suffering must necessarily be extended. How can trade be expected to prosper under such circumstances? Peace signed is not peace secured in its fullest sense. The principal European powers were evidently averse to war, not from any philanthropic feeling, but because they were not fully prepared for it, or had exhausted their strength and finances; but England in every respect was never better prepared to assert her rights and just demands; and, heavy as the responsibility might have been for the Government to declare war, yet if the British Government considered British interests endangered they ought not to have shrunk from that responsibility. But what have they done? Why, they have agreed to a peace which they themselves declare to be only a respite, and they have left the Eastern Question, with all its complications, for posterity to settle. That which they were afraid of, and had not courage to face, or found so difficult to arrange, is "generously handed down to future ages for final adjustment." Most noble, most charitable deed to leave to our children to fight out and shed their blood over. The sacrifice which we shun is not, however, deemed too great for them. We dread the burden of expense, and all the horrors attending war, and rather than have our ease disturbed, or grapple with the enemy, we leave it to those who follow, believing all the time that there will be at least ten times as much blood shed then as there would be now, and all this in an age which is termed advanced civilisation, and between Christian nations. There is no honour in such a peace, but shame and disgrace; and it will be an everlasting stigma upon the present age that it left its battles to be fought by the rising generation. There is as yet no security or protection; and, as far as England is concerned, a splendid opportunity has been lost by which she could have secured the entire mastery of the situation. No doubt our plenipotentiaries did the best they could at the Conference, for they had an extremely difficult task to perform; but the error was committed before they left for Berlin, and the encroachments of Russia ought to have been steadily resisted at all costs.

There are already grave doubts as to whether the Berlin Treaty can be carried out in a peaceful manner and in its entirety, for insurrection appears to be spreading in Greece and Bosnia. The unnecessary continuance of the Russian troops at San Stefano is also a cause of irritation, and until these sources of disquietude are removed there will be no safety, as hostilities may break out afresh at any moment. But passing on to the Anglo-Turkish Convention we would ask, are there any grounds for satisfaction in this document? Some may say yes; Cyprus. English skill and enterprise will make it a rich and productive country. Well, we sincerely hope it may be so, and that the inhabitants will be benefited by our rule, but from all accounts the ports are silted up, and the whole country is in a dreadfully neglected state, which will occupy a considerable time before it gets put in order, and an immense amount of money will be required for carrying out Government works, such as piers and breakwaters, harbours and bridges, roads and railroads, irrigation and drainage, &c. The cost of labour alone will be something enormous, unless convict labour is imported, but after we have brought the island round to perfection, and thoroughly developed its resources, and many English are settled there, we may have to give it up to Turkey; we could not honestly object for we only occupy it conditionally. The Turk might envy us of its possession, and what is to prevent him picking a quarrel with Russia, and then call upon us to aid him in resisting Russia; and assuming that we put Russia back to her original frontiers, the Turk could then claim the retrocession of Cyprus, and we should be requited in a similar way as Romania, who after having rescued the Russian army from defeat had to restore Bessarabia. The possession of possession of property upon such terms as we hold Cyprus is not satisfactory; if we wanted the island, or any other portion of territory belonging to a civilised power, we ought to arrange differently, and not render ourselves subject to fight our landlords' battles. To sign a peace which brings us nearer to war is a strange anomaly, and we do not wonder at British merchants and capitalists doubting the wisdom of such agreements, and thus abstaining from entering into any engagements of magnitude.

There are ample ways and means of employing our spare capital in the improvement of old possessions without acquiring new ones for that purpose. Increased taxation to carry out fancy schemes is anything but an agreeable prospect, and some relief is needed from present burdens, but any addition to them would be intollerable. The Anglo-Turkish convention grants us the privilege, as it is termed, of enforcing reform upon Turkey, but what is likely to occur if we ever put in practice the privilege? Why, immediately we begin to institute a new rule the wicked old pashas will know their days are numbered, and we shall unquestionably encounter their utmost opposition and hatred, and they will try to stir the people up against us, which will, no doubt, render progress very difficulty, if not impossible. Besides, as sure as ever we land forces on the mainland in Asia Minor and approach Syria, we shall greatly excite the jealousy of France and Italy. But what is our object in upholding Turkey unless for securing a highway by land to India, and that by means of a railway; but if we carry our commercial projects too far it will involve us in political squabbles, and instead of finding our strength augmented and consolidated, we may find our extended line of defence beyond our capabilities. We may be performing a very kind and charitable act in endeavouring to improve and reform other nations, but we should look at home and we shall find quite enough to employ our energies, time, and money. We condemn Russia for her greed of territorial aggrandisement when we are all the while extending our own dominions under the pretence of frustrating Russia. We arouse the suspicions of other nations because they see we are not true to our policy of non-appropriation, but are ready to avail ourselves of any excuse to advance our imperial interest. Is it surprising then that the commercial community show so little confidence in the new order of things? The fears of war have not ceased, but been increased, for Russia only wants time to recruit her strength ere she renews the contest, and we run the increased risk of being brought into conflict with Turkey through the evil machinations and spite of the pashas, in addition to the trouble and pressure that France and Italy might bring against us. At this moment we are on good terms with our neighbours, and we hope long to remain so; but a new set of men will spring up in the French nation who may be jealous of and dislike our power and influence; and so with Turkey, who may invite France hereafter to come and turn us out, and with the promise of Egypt she may essay to do it. Now, we do not think any one will accuse us of favouring political factions, as we have merely discussed the measures, and treated the subject in a natural and commercial spirit; and all we have to say in conclusion is this, that if the policy of the British Government is likely to lead to future embarassments with other countries it is very certain that our commerce will not develope, and it will be extremely difficult to remove the fears that are at present entertained. A bold and decided policy is at all times to be preferred to a vaccillating one, and should have been adopted at first, as there is nothing ever gained by indecision. The losses that have been sustained during the last year or two by the contraction of commerce are almost as much as many wars have cost, and after all the time lost over the Eastern Question there is still nothing definite and permanent arrived at, and we are still the victims of our fears. The desired relief is not forthcoming, because the course has not been made clear and smooth, the result not being deemed a satisfactory settlement, for it leaves the question undecided and liable to be re-opened again at any moment. How could any just settlement take place when the Berlin Conference was actuated with only what concerned and affected their several Governments, and not with the right and proper principle of what is most agreable and suitable to the wishes, and dispositions, and interests of the different people. No, the interests of the people most deeply concerned have formed a very small matter, and they have been distributed and parted off like so many cattle, whether they approved the transfer or not. There has been no attempt made to reduce the standing armies of Europe, which would have been the strongest proof of the peaceful intentions of Europe. The Board of Trade Returns issued for the month of July declare the total value of our national exports to be 16,400,857*l.*, against 17,587,301*l.* in July, 1877, or a reduction of nearly one million sterling. This is a true sign of the times, and a confirmation of the awfully depressed state of trade, and the feeling seems to be gaining ground that business will not increase unless lower prices are accepted. We should never have got into the present dilemma if sellers had met the market freely at first, and prevented stocks from accumulating. Now the sacrifice will be so much the greater, and as yet there is no prospect of relief.

COPPER.—Messrs. James and Shakspeare's next auction sale of Wallaroo is on Tuesday, the 20th inst., when 766 tons of cake will be offered for sale, and in the event of all the copper being disposed of, which cannot fail to be the case, for be it remembered to the praise of the company they never distrust or insult buyers by fixing a reserve price, but leave it entirely to the free and open competition of the room, and since the trade has now had repeated opportunities of becoming acquainted with the wise and honourable course invariably pursued at these sales, they come prepared to bid the utmost possible price, and the company undoubtedly derive the highest advantages obtainable. They well deserve to do so. We may also here remark that their interests are never likely to suffer while they retain the valuable services of such able and accomplished brokers as Messrs. James and Shakspeare. The interval between the Wallaroo sales will be as near as possible three months, and buyers will duly appreciate this considerate and prompt compliance with their wishes, especially if it be strictly adhered to in the future, which we are given to understand will be so providing the copper is available. We cannot refrain from speaking in the highest terms of commendation of the Australian importers for continuing to supply the market with such periodical precision when prices are known to be so extremely unfavourable, and to point out the great contrast between them and the Chili importers, who lose so much business in consequence of their withholding produce from the market, as clearly shown in a recent instance of a sale of about 1500 tons of precipitate to the smelters; but this is only one of many cases by which smelters supply themselves from other sources to the detriment of Chili producers, and while other descriptions of copper are going into consumption Chili is accumulating, and consequently depreciating, for at the end of December, 1869, when stocks were somewhat similar to the present period, the price was 86*l.* 10*s.*, and in December, 1870, it had fallen to 64*l.*, and it is now only about 61*l.*, and this is, no doubt, accounted for by the smelters being no longer dependent nearly so much as formerly upon Chili, and they will probably be less so in the future. Spain has again come to the front, and her immense mineral resources, which are now being worked with redoubled energy, will for many years form a strong barrier against Chili. Importers of Chili may, therefore, make up their minds that unless they are prepared to come into the market and sell cheaply, they will make very little progress in the sale of their produce. The only years in which the stock of copper assimilated to that of the present time were in December, 1869 and 1870, and the figures are as follows:—

	Dec 3, 1869.	Dec. 31, 1870.	End of July 1878.
Stocks in England ..... Tons	24,195	27,9 2	28,895
Stocks in France	6, 50	8,855	10,420
Totals .....Tons	30,445	36,807	39,315

The above are the actual stocks, and of course exercise the principal influence upon the market; but in order to give the market the best possible appearance, we will now add that which was afloat and advised either by mail or telegram, so as to include all that was visible up to said dates:—

	Dec. 31, 1869.	Dec. 31, 1870.	End of July 1878.
Chili afloat (by mail) .. ..Tons	13,593	10,688	4,412
Chili (by telegram, 31st of month)	6,800	3,500	6,000
Total to end of December	50,838	50,995	49,727

The shipments are now made principally by steamers, and, therefore, the communication is more rapid, and arrivals take place quicker, and with greater regularity than formerly; and, again, the quantity advised may at any moment receive a sudden increase, and entirely reverse the previous return. We never care to follow the telegrams too closely on this account, as they may prove very deceptive; the actual stock is always the surest index to the demand, and we may rest satisfied that if actual stocks are declining prices will be rising, but if stocks are increasing prices should be falling. The Indian demand does not improve, and smelters will have to accept lower prices for manufactured and yellow metal before any large orders will be given out, as the exchange has again fallen, which renders business impracticable. The advices from New York on July 24 report the market there to be sluggish for ingot, and values are quite nominal in the absence of any important business. Lake is quoted 16*c.* The Burra Company have announced a sale of of 150 tons of Burra cake and ingot, to follow Messrs. James and Shakspeare's Wallaroo sale on Aug. 20, at the Baltic Sale Rooms. Australian copper is rather lower. Wallaroo has been offered at 72*l.* Chili a little firmer; the price is said to be upheld chiefly for the purpose of facilitating financial arrangements.

IRON.—Nothing has occurred up to the present time to induce us to alter the opinion we have formed and expressed regarding this metal. The only difference in the state of the markets, and it is only in the least observable, relates to Welsh bar and North of England pig-iron. Scotch pigs have benefited slightly by reason of speculation, but the bulk of the trade is manifestly weak for shipments, being once again considerably less than those of the corresponding period of last year. With regard to Welsh bars, makers having booked some orders for the Levant and the Danube are trying hard to realise an extra 2*s.* 6*d.* per ton, but buyers decline paying the advance, and as the Indian demand has almost entirely ceased there is very little chance of sellers realising higher prices, and they should think twice before they refuse orders at former rates, otherwise they may find them only repeated at lower rates. Staffordshire cannot be sold without making further concessions, which makers are prepared to listen to if reasonable, and it is very evident that no general improvement has taken place in the iron trade. It is only in the usual order of things that one district may be better off for work one week than that of another, but that in itself does not constitute a change of any importance upon which to build an advance in prices, sellers should wait until they see their competitors well supplied with orders before they think of making an alteration themselves. If the Welsh houses have a few good orders on their books they should not run away with the notion that they can immediately command an advance; they should first ascertain how the East Coast mills are employed, and whether Belgian iron has improved. It is the greatest absurdity imaginable to drive the demand away by quoting impracticable prices; the demand has been long enough coming, and exceedingly difficult to obtain, and no sooner does it begin to give an appearance in places of resuscitation than sellers take the most effectual means to smother it. Can anything be more stupid or unbusiness-like than this suicidal policy?

The Staffordshire houses are exhibiting good common sense, for they do not pretend to make out that business is so much better as to justify higher prices, but, on the contrary, they admit that for certain work, such as sheets and nail-rods, they are badly off for orders, and would not object to meet buyers' limits. In pursuing this course, and not yielding to speculative ideas, or misrepresenting facts, they will preserve the balance of trade, and we hope it will soon turn in their favour, for plain honest dealing deserves to rewarded in the most handsome and liberal manner. As speculation is inopportune we do not hesitate to condemn it. In the first instance, we verily believe it would be a failure, and we cannot understand anyone making a venture unless there a good margin in prospect. Can this be said of iron at the present time? We should think if anyone made a few pence per ton it is as much as he would be likely to get; but that is certainly not commensurate with the risk, or anything like an adequate profit. To make an operation worth anyone's while there ought to be at least a few shillings per ton of probable profits; but with manufactured iron still declining, and shipments of pig-iron still declining, it is hard to believe that upon *bona fide* grounds such a result could be realised; and if people are going to speculate for the mere sake of speculating, they had much better keep their money in their pockets; but the market never will be wholly clear of the wild and reckless speculators; they are always cropping up, spoiling everything, when they are least wanted, and what they cannot benefit by themselves preventing others from being benefited. We want rest, that genuine buyers may have an opportunity to judge of the soundness and stability of the market, and for the exercise of remedial and restorative means; but the restlessness of speculators continually disturbs its equanimity, and shakes the confidence of buyers. No large transactions are likely to take place while the price is unsteady, and the market being fidgetted about from day to day. There is no solidity in trade yet awhile, and, therefore, any upward movement is premature and unadvisable. An entire absence of speculation is to be preferred just now to a random and an immoderate speculation, for nothing whatever should be done that would in any way interfere with the steady and gradual revival of legitimate business.

The trade, according to the various returns from the several districts, remains without any material alteration. Great dulness is observed on most of the markets, which has now been the case for very many months past. It was thought at the earlier part of the year that if the Eastern Question became peacefully and solidly settled the markets would soon recover from the monotonous and drowsy state into which they had fallen. The present, however, only shows that the opinions entertained by the trade are not favourable to the settlement, for there is no peace in the iron trade, except it be in its dull condition. Certainly makers possess no peace as to their future welfare, for although they may try to flatter buyers with the idea of its being a good time to purchase, there is evidently much anxiety experienced by them to obtain further orders. Several members of the trade have been giving themselves up to holiday making and pleasure seeking. This may seem to be rather extraordinary in such bad times, but, if extraordinary, it is a pardonable thing to do for those who are able and can afford it, and we would recommend such to turn these dull times to the best advantage in recruiting their health and strength, in order to return to their work with renewed energy when business becomes more active, especially as their presence just now is not required much at the mills. The distressed state of trade is general throughout the kingdom, and not only in this country, but we might almost say without exception universally, for mail after mail comes in filled with reports of the languid state in which business still remains abroad. None of the mills at Leeds are working more than three days per week, and it is impossible to state that any perceptible improvement has taken place in business at that port. It would be difficult to state for which description the demand is the most active; perhaps the best Yorkshire iron stands at the head of the catalogue, but this is saying very little for it. Prices are said to be too low to enable sellers to realise any great profit by their transactions, yet apparently too high to enable merchants to place their orders.

The market at Barrow-in-Furness for finished iron is reported as remaining in a very dull state. Owing to the Bank Holiday, no meeting on change was observed last last Monday, consequently no change in prices has taken place, but last week's quotations continue to rule the markets. Stocks are still said to be large, and no one appears to expect any increased production in the furnaces until stocks become considerably reduced, which may take some time to accomplish. Small and few sales take place for iron ore, although it is stated that the number of enquiries are pretty numerous and prices remain steady. Undisturbed quietness is observable on the Sheffield markets, but as makers are said to be rather firmer in their quotations there is little to induce buyers to come forward with their orders, especially as thoy can scarcely pay existing rates, leave alone higher ones. Sellers are only injuring their own interests by attempting to raise prices prematurely. But enough has already been said on that score; suffice it say, as we have several times previously stated, that it is impossible for any general improvement to take place in the trade if masters will persist in advancing their quotations, though it only be to a trifling extent, whenever any little extra demand springs up. From South Durham there is little change to be reported from any of the markets, but, taking them all on a whole, a rather quieter feeling has been noticed. Quotations for pig iron keep tolerably steady, No. 3 being obtainable at 39*s.* 6*d.* to 40*s.* per ton for forward delivery, while for prompt shipments 39*s.* can be realised. The returns for last month show that the make for pig-iron exceeded the previous by 3686 tons, amounting to 139,015 tons, and 77 furnaces blowing; while for other kinds of iron, including hematite and spiegeleisen, 17 furnaces were kept in blast, the increase in make being 826 tons, or making a total of 29,816 tons. The increase of foreign shipments from Middlesborough amount to 7518 tons, and the coastwise ditto 2314 tons. We are glad to note a reduction in stocks, they now amounting to 298,210 tons. At the Rotherham district it is reported that the enquiries have rather increased, and the turn out of rails is said to be very fair, and many of the mills are obtaining regular employment. The heavy iron trade, however, is but moderately active. Prices remain without any material alteration, but it is stated that there is a good deal of uneasiness about the wages question.

The continental markets generally, like those at home, are said to be in a dull condition, although no very important change has occurred upon any of them. There is little alteration expected to take place on the French markets for the remainder of the year, as it has now so far advanced without bringing any improvement. Several Belgian firms are reported as selling some descriptions of iron on the French markets at 4*l.* 12*s.* per ton. The mail from New York of the 27th ult. complains of sales of Scotch pig iron in that country being confined to very small parcels, just to meet the most urgent wants of the trade, Coltness is quoted at $23 to $23 50*c.*, and Eglinton, $21 to $21 50 c. The demand for scrap keeps quiet and unchanged. We quote No. 1 wrought $ 9 to $20 from yard, and cast $12 to $15. A fair demand exists for new rails at $32 to $33, but old are dull, and prices keep nominal, being quoted at $17 to $18. There is no alteration stated to have taken place in manufactured, the demand keeping very dull, and prices showing a rather easier tendency. The warrant market at Glasgow kept quiet all last week at 50*s.* for prompt cash up to she end of the week, when 49*s.* 10½*d.* was accepted. This week the market opened at 49*s.* 10*d.*, and gradually improved to 50*s.* per ton, the present price being 50*s.*

SHIPMENTS.

For the week ending Aug. 4, 1877	Tons	8,241
For the week ending Aug. 3, 1878		5,971
Decrease		2,270
Total decrease for 1878		45,1.6
Imports of Middlesborough pig-iron into Grangemouth:—		
For the week ending Aug. 3, 1878	Tons	5,750
For the week ending Aug. 4, 1877		5,200
Increase		550
Total increase for 1878		6 500

FURNACES.

In blast Aug. 4, 1877	107
In blast Aug. 3, 1878	96

LEAD.—This metal remains quiet, and prices have an easy tendency. The imports for the first seven months ending July 31 are as follows: 1876, 45,691 tons; 1877, 58,039 tons; 1878, 59,461 tons, and the exports amount to—1876, 20,061 tons; 1877, 23,235 tons; and 1878, 21,944 tons.

TIN-PLATE shipments compare favourably with former years, and stand thus:—1876, 75,458 tons; 1877, 89,391 tons; 1878, 90,161 tons.

SPELTER.—Quiet, prices drooping. The imports are comparatively large up to end of last month:—1876, 14,353 tons; 1877, 17,339 tons; 1878, 20,189 tons. Manufactured or zinc:—1876, 139,244 cwts.; 1877, 161,034 cwts.; 1878, 185,000 cwts.

QUICKSILVER.—There has been more doing this past week at 7*l.*

TIN.—English and foreign are 10*s.* per ton lower than last week's quotations. The market is very dull and unsatisfactory, and there appears no prospect of any immediate improvement. Our advices by the Australian mail report that on the east coast of Tasmania the tin mines continue to give satisfactory yield, and that the value of tin exported for the first four month of this year compares favourably with former periods. On the West Coast, till recently almost untrodden by the foot of man, vast mineral discoveries are being made, and the next season is expected to see a large population there. The imports of tin for the first seven months of this year, according to the Board of Trade Returns, are—195,305 cwts. for 1876; 182,025 cwts. for 1877; and 219,421 cwts. for 1878; and the exports are—81,259 cwts. for 1876; 45,144 cwts. for 1877; and 80,852 cwts. for 1878.

THE IRON TRADE.—(Griffiths's Weekly Report).—Friday evening. The Glasgow market has been quiet this week. The price of g.m.b. warrants this afternoon at the close was 49*s.* 10½*d.*, buyers—exactly the same as the closing price last Friday. We quote makers' No. 1 iron—Gartsherrie, 57*s.* 6*d.*; Coltness, 60*s.* 6*d.*; Calder, 58*s.*; Langloan, 57*s.* 6*d.*; Summerlee, 54*s.* 6*d.*; Monkland, 50*s.* 6*d.*, f.o.b. Glasgow; Glengarnock, 55*s.* 6*d.*; Eglinton, 50*s.*, f.o.b. Ardrossan; Shotts, 58*s.*, f.o.b. Leith. There is but little change to notice in the iron trade. Perhaps pig-iron is firmer on the Middlesborough Exchange, with prices unaltered. The Glasgow market is without quotable change in price; market steady. On the West Coast business is quiet; very few of the smelters care to sell at present prices. Numbers of furnaces continue idle in this district, the smelters alleging that hematite pigs at present rates leave no profit with the price of ore at 13*s.* per ton, and without a modification in the cost of ore other furnaces will soon be blown out on the coast of the hematite district. The trade in Northamptonshire is very quiet, several furnaces being idle. In Staffordshire there is a much more hopeful feeling, and the general trade in this district is better. Pig-iron is firmer, and the manufacturers of marked bars and all kinds of second-class iron have received fair accessions of orders since Quarter-Day. The trade in Shropshire is quiet, but pig-iron in this important producing district is firmer. There have been this week enquiries sent down to the works here for boiler-plates and nail-rods, which we hope will soon result in improved business. The iron trade in Derbyshire is a little more active, and the Yorkshire houses have had considerably more enquiries this week for the specialties in best iron produced in the neighbourhood of Leeds and Bradford. There has been a moderate business done this week on our market in galvanising sheets, nail-rods, and best bars. Prices are a little firmer; no quotable change in an upward direction has been registered. Copper continues weak, with a drooping tendency. Tin unchanged; Australian, 61*l.* Market for spelter is firm.

At the Swansea Ticketing, on Tuesday, 2546 tons of copper ore were sold, realising 10,410*l.* 1*s.* The particulars of the sale were—Average standard for 9 per cent. produce, 74*l.* 14*s.* 6*d.*; average produce, 8 5-16; average price per ton, 4*l.* 1*s.* 9*d.*; quantity of fine copper, 211 tons 19¼ cwts. The following are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
July 23	2041 ...	£74 15 6 ...	7¾ ...	£ 3 11 3 ...	9*s.* 8¾...	£48 9 2
Aug. 6	2546 ...	74 14 6 ...	8 5-16...	4 1 9 ...	9 10 ...	49 2 2

Compared with the last sale, the standard has slightly declined. The Spanish ore gave an average of 5 15-16 per cent., and sold at

8s. per unit; Caveira, produce 5 5-16, per unit 8s. 5½d.; Union, produce 12¼, per unit 10s. 11½d.; Berehaven, produce 9 15-16, per unit 11s. 0¼d. There will be no sale on Aug. 20.

No alteration whatever has taken place in the MINING SHARE MARKET since our last. Business is almost at a standstill, and our prices are merely nominal. This depression, however, is not confined to mining property, but is observable in all descriptions of securities, and trade generally has not revived as it was expected that it would.

TIN continues flat, and the latest returns of the Board of Trade for June are anything but favourable. The imports of tin are given at 179.239 cwts., against 148,016 cwts. for the corresponding period of last year. The exports for period of 1878 were 60,368 cwts., against 61,575 cwts. in 1877, so that the importation of tin was 31,233 more, and the exports 1207 less than last year.

In TIN SHARES there is scarcely anything doing. South Condurrow are 11 to 11¼. cum div.; at the meeting (particulars of which will be found in another column) a dividend of 8s. per share (2449*l.*) was declared, leaving 2348*l.* to be carried forward. The tin sold—248 tons—realised 9158*l.*, or 37*l.* per ton, and the profit on the four months' working was 2593*l.* 18s. 2d. The report states that the 93 end east is worth 20*l.* per fathom; west, 8*l.*; north of the Plantation shaft the lode has been cut, worth 20*l* per fathom each end. This is standing whole to surface, and may yield large quantities of tin. The producing powers of the mine are all, the agents state, that can be reasonably desired, but the low price of tin prevents larger profits. Carn Brea. 32⅛ to 35; Cook's Kitchen, 10s. to 15s.; Dolcoath, 26 to 27. East Pool, 9 to 9¼; a dividend is expected at the meeting. South Frances, 3⅜ to 4¼; Tincroft, 7¼ to 7½; West Frances, 2½ to 2¾; Wheal Agar, 3½ to 4; Wheal Grenville, 1¾ to 2; Wheal Peevor, 5⅜ to 6½, ex div.; Wheal Uny, 17s. 6d. to 20s.; West Godolphin, 1 to 1¼. At South Tolcarne meeting a call of 4s. per share was made. The accounts, after charging 16 weeks' cost to he end of June, showed a credit balance of 576*l.* 7s. 8d. The report was encouraging.

COPPER MINES are without change, and without business. Devon Great Consols, 2 to 2¼; Mellanear, 3½ to 4; West Tolgus, 52½ to 55; Morfa Du, 12s. 6d. to 15s.; the lode, it is expected, will be soon intersected here. Parys Mountain, 7s. to 9s.; Penstruthal, ⅛ to ¼. West Seton, 8 to 10; iti s feared that a call may be required at the meeting. South Caradon, 50 to 60.

LEAD MINES show no great change, and business transactions are still limited. Roman Gravels, 7½ to 8; the 110 south is worth 1½ ton of lead per fathom. Tankerville, 3½ to 4; particulars of the meeting here will be found in another column. Rookhopes have been in good request at an advance upon the low quotations lately ruling, and it seems now almost impossible to get shares; the last price is ⅜ to ⅝. There is a great improvement in this mine, and the agent hopes to raise 15 to 20 tons of lead per week. This would leave a good profit. The late depression, we understand, was not caused by any falling off in the mine, but it was necessary to make extensive alterations in the dressing department, which has caused delay in making the increased returns promised some months ago. Van, 17 to 19. East Van, 4¼ to 4⅜; the cross-cut from the bottom of the shaft has been driven 5 ft. towards the lode. West Tankerville, 10s. to 15s.: the sale of lead ore this week (20 tons) realised 206*l.* South Roman Gravels, 2s. 6d. to 5s.; on what was supposed to be a branch of the Roman lode driving north has for some time been going on, and the agent now reports that it has widened to a lode of 18 in., and letting out a deal more water, and it is to be hoped that it may lead to something good.

Pateley Bridge shares have advanced from 2¼ to 3, 4, but it is difficult to get at a close quotation. We have for some weeks past called attention to the improvement going on here, and since our last there is a still greater improvement, the nature of which will be seen from the agent's report in our Mining Correspondence. This improvement accounts for the rise in shares. South Darren, 35s. to 40s.; the lode in the winze below the 90 is worth 2½ tons of rich silver-lead per fathom. No. 1 stope is worth 2½ tons, No. 2 stope 1½ ton, and the stopes in the 80 fathom level ¼ to 1 ton per fathom. D'Eresby Mountain, 80 to 85; D'Eresby Consols, 10 to 11; Aberllyn, 10 to 11; Denbighshire, 1 to 1½; Glenroy, ⅝ to ¾; Great Laxey, 18½ to 19½; Great Holway, 4⅜ to 5¼; Leadhills, 2¾ to 3¼; Tyn-y-Fron, 1⅜ to 1½; West Chiverton, 7 to 8; West Pateley Bridge, 2 to 2½; Grogwinion, 2 to 3, cum div.; Wye Valley, 1½ to 2; West Wye Valley, 2¼ to 2⅜; South Cwymstwith, 2 to 3; St. Harmon 2 to 3; Caron, 2½ to 2¾; Red Rock, 2 to 2½; Hartington, 1½ to 2; Mawston, 55 to 65.

FOREIGN MINES.—Blue Tent, 2¾ to 3; Cape Copper, 31 to 32; Colorado, 4 to 4½; Chontales, 10s. to 12s. 6d.; Don Pedro, ⅜ to ⅝; Eberhardt and Aurora, 6¼ to 6¾; Fagstaff, ½ to ⅝; Frontino and Bolivia 1⅜ to 2. Pitangui (Gold), par to ½; the adit has been driven 125 fms. 3 ft., and in about 11 fms. is expected to enter the jacotinga, or gold bearing strata. Javali, 8s. to 10s.; Last Chance, 1 to 1⅛ New Quebrada, 1⅞ to 2⅛; Port Phillip, ½ to ⅝; Richmond, 9½ to 9¾.

The Market for Mine Shares on the Stock Exchange, although still in a very depressed condition, has given more evidence of animation, especially in foreign descriptions, than for many weeks past, and even the slightly lower prices at which many shares are quoted may be taken as a favourable circumstance rather than otherwise, since it may be regarded as an indication that at least some *bona fide* business is doing, and that the period of purely nominal quotations is passing away. South Condurrow close at 11 to 12, the declaration of the 8s. dividend on Wednesday and the favourable statement as to the future of the mine made at the meeting having given great confidence in the property, which is being made to return good profits, notwithstanding the unprecedentedly low price of tin. It is much to be wished that all our mines were equally well managed, as fewer complaints would then be heard either from adventurers or miners. To-day Colorado United has been dealt in as high as 4¼, London and California at ⅝, New Quebrada at 1 15-16ths, New Zealand Kapanga at 1¼; Richmond, various transactions at a little above and below 9⅛; and Rio Tinto 7 per cent. bonds at 14¾. Altogether the market looks much more healthy.

With regard to future trade prospects generally the feeling is also much more encouraging both here and in America. Writing from New York, for example, Messrs. Thomas J. Pope and Brothers, state that with the conclusion of peace in Europe, the opening up, on a large scale, of new enterprises in the countries of the recent conflict commences at once, and this, with the return of confidence in the markets of that section, starting general trade, a period of gradual recovery from the stagnation of the past is more than likely to ensue. In the United States abundant crops, greatly developed and very productive mining enterprises, the approach of specie payments, an abundant and sound currency, and the recent harmless withdrawal to their quiet homes of all the congressmen of the United States, indicate a revival of confidence and a steadily improving business for at least the remainder of the year. Already many articles are feeling the impulse of renewed demand, and the almost apparent certainty of an active fall trade.

In connection with the Richmond directors' dispute the Master of the Rolls has decided in favour of Mr. Pulbrook. It will be remembered that Mr. Pulbrook, prior to his election was possessed of 100 shares, or sufficient to qualify him as a director; but owing to some mistake a Mr. Cuthbert, a transferee of the shares, but who had agreed not to register the transfer, had been put on the register, so that at the time of his election Mr. Pulbrook had not, according to the register, the necessary qualification shares. By an order, however, of Mr. Justice Field, which was subsequently affirmed by a Divisional Court, the company were ordered to rectify the register by striking out Cuthbert's name as the transferee of the 100 shares. When the order was confirmed Mr. Pulbrook gave an undertaking not to question any of the prior acts of his co-directors, who now contended that he was no longer a director of the company, and threatened to exclude him from the board. In delivering his judgment his lordship said the case was one of some importance and novelty. The first question was whether a director who was improperly and without cause excluded from the board by his brother directors was entitled to restrain their doing so when the director was also a shareholder. In his opinion such a director had an individual right of action against the directors excluding him on account of the deprivation of his legal rights which he thereby suffered. But there is one portion of the Master of the Rolls' judgment which is not calculated to increase the confidence of shareholders with non-legal minds that the qualification clause of a company's articles affords any guarantee of the financial stability of the members of the board since none of the directors need have any beneficial interest in the shares standing in their names. Any director can it would appear sell and receive the money for his shares, and yet continue to sit in respect of those shares provided he can induce the purchaser to agree not to register the transfer without the said selling director's permission. The Master of the Rolls said that there was no dispute as to the actual election, or that his time of office had not expired; all that was said was that at the time of his election he did not hold the necessary number of qualification shares, and that the meaning of the Articles of Association which had been referred to was not that it was necessary to hold the shares "in his own right" beneficially, but that as the Court were precluded by the Companies Act from regarding any trusts attaching to the shares, all that was required was that a person should be on the register in his own right, and not as an executor or administrator, or as the husband of a lady who might be a shareholder, which rights the words were evidently intended to refer to. Adopting the orders of Mr. Justice Field and the Divisional Court his lordship decided that Mr. Pulbrook had been duly qualified when elected, that he remained a director at the present time, and was entitled to the injunction asked for. In consequence of his undertaking he could not of course complain of anything that had been done by his co-directors in the meantime.

In last week's notice of D'Eresby Consols meeting a serious omission occurs. It should have been stated that Mr. S. W. Daukes was not present at the meeting when his name was connected, presumably at least, with a project for performing an engineering impossibility. Mr. Daukes' high professional reputation is so well known that it is unnecessary to say that he had no voice in the estimate mentioned, and has never proposed to make a lake or any other body of water lift two-thirds of its own bulk to a height of 40 ft. above its own level. Had Mr. Daukes been present at the meeting he would no doubt have been the first to expose the fallacy of the attempt spoken of, as it is an ascertained fact that even the best form of water-wheel under the best conditions cannot in practice be made to yield more than about 60 per cent. of its theoretical power, and that, to however good a water-raising engine such wheel might be applied, a large proportion of this 60 per cent. would be lost in raising the water 40 ft. above the level of the wheel. With undershot wheels only about half as much power is utilised, as with overshot wheels, whilst rams, &c., utilise still less.

Pestarena, 4s. to 5s.; the produce for July was 539 ozs. of gold from 878 tons of ore, the average yield being 12 dwts. 6½ grs. per ton.

English and Australian Copper, 1¾ to 1½; at the meeting on Thursday the accounts to Dec. 31 will be submitted, showing an estimated profit on the six months working of 2290*l.* 11s. 11d., which the directors will be augmented by the results of the second half-year. The reserve fund now stands at 10,194*l.* 6s. 9d. The company received during the period reported upon 9327 tons of ore, regulus and precipitate, from various mines, against 7616 tons in the corresponding six months of the preceding year. They made 1222 tons of copper against 1183¼ in the corresponding period of the preceding year. The company's wharf at Port Adelaide earned 1287*l.*, against 1688*l.* in the corresponding period of the preceding year. Burra copper appears to have reached the lowest point in May, since which it has recovered 30s. per ton.

Richmond, 9 to 9½; the usual telegram from the mine at Eureka states that the week's run was $56,000 from 90 tons of ore. During the week the refinery produced doré bars to the value of $55,000. The manager, after reporting on the various points of operations, states that the drifting of the 400 on the quartzite has been resumed. The 500, on quartzite, is without change; the same level, on fissure, is looking more promising for ore; at present there are 6 in. of ledge matter and galena. The winze on the fissure below the 500 is without change; favouable ground for sinking, with very good indications. The 680 west drift is in hard ground, consequently slow progress is being made. All other parts of the mine are without change to notice. The furnaces are smelting the usual quantity of ore daily.

Last Chance, ⅞ to 1⅛; the telegram from the Chairman states that the machinery will commence working on the 10th: all progressing satisfactorily.

The Consolidated Virginia and California Mines now yield 250 tons of ore each daily. There are no changes of interest from the former, the ore-producing sections remaining unaltered. The heat in every portion of the latter is intense, and it with great difficulty that any ore is extracted. Since completing connection with the Savage workings the air in the Sutro tunnel has cooled considerably. The heading is being steadily advanced towards the Savage shaft, and will be continued not only to the west wall of the great Comstock lode, but further into the wall than any of the mining companies have yet penetrated.

Colorado United, 4¼ to 4⅜; the superintendent (July 18) writes that stope No. 2, in the 8th level, is the best stope in the mine. They have opened up 30 fms. of this ground, and have in places over 6 in. of splendid mineral, and nowhere less than 3 in., and the stope is looking better every day. The Union Tunnel is in 600 ft., and about 30 feet from the breast they cut through a small vein of mineral, which from its dip is without doubt the Tuscorora. They put a drill (two men) on yesterday, and it is already looking very fairly. Union Tunnel stope, west of the Old Terrible ground, is looking very well, the mineral not so irony, and of much better quality; they have fully 4 in. in the east end, and 2 in. in the west end. Silver Ore shaft, sinking on the same body of mineral, is looking as well as ever, and 6 in. wide.

Lead Mine shares do not display any great activity, but there has been an important movement in Pateley Bridge, which at the close of the market were quoted 3 to 4. For some weeks past the improvement in the mine has been referred to, and it is now reported that the mass of mineral in the 30, east on the Rake vein, which was so favourably reported upon a month ago (August 8) is 4 ft. wide of solid galena, worth fully 10 tons per fathom. This point is being worked by eight men, at 5*l.* per fathom. The July produce was 50 tons, worth 500*l.*, raised at a cost of 330*l.*, and they have nearly 100 tons of dressed lead ore now in course of smelting. It is reported that at West Pateley the improvement in the 20 east on the North Rake vein maintains its value.

Mineral Corporation, 10 to 11; the report from the Hafna Mine continues favourable. In clearing No. 1 adit they have discovered much lead ore that will pay for stoping; a box of the lead from this ground has been sent to the London office. The lode in the back of the Tramway adit has also improved, and is at present worth 1 ton of lead per fathom. The water-wheel and crusher are now in good working order.

Van, 18 to 19; the 105 west has improved, being clear of the cross course, worth 3 tons of lead per fathom. Grogwinion, 2 to 3, cum div.; no news to hand this week. Wye Valley, 1½ to 2; a parcel of 30 tons of lead has been sampled for sale. West Wye Valley, 2¼ to 2⅜; the dry weather still prevents the dressing of ore. Caron, 2¼ to 2⅜; good accounts continue to be received from this property, and the early starting of the new machinery is looked forward to with interest. Red Rock, 2 to 2½; the new discoveries maintain their favourable appearance, and there are prospects of further improvement at no distant date. Saint Harmon, 2 to 3; good progress still making at all points. South Cwmystwith, 2 to 3; no change of importance this week. Mawston, 55 to 65. Hartington Moor, 1½ to 2.

Subjoined are the closing quotations:—

Assheton, ⅛ to 1; Devon Great Consols, 1½ to 2 prem.; East Caradon, ¼ to ⅜; East Van, 4¼ to 4½; Glenroy, ⅝ to ¾; Glyn, ⅜ to ⅝; Great Laxey, 18 to 20; Hingston Down, ⅛ to ⅜; Leadhills, 3¼ to 3½; Marke Valley, ⅝ to ⅞; Parys Mountain, 7s. to 9s.; Pateley Bridge, 3 to 4; Penstruthal, 3s. to 5s.; Roman Gravels, 7½ to 8; Tankerville, 3¼ to 3½; Tincroft, 8 to 10; Van, 18 to 19; West Assheton, ½ to 1; West Chiverton, 7 to 8; West Basset, 4 to 5; West Pateley, 2 to 2⅜; West Tankerville, ⅛ to ¼; Wheal Grenville, 1¼ to 2½; Almadsand Tirito, ⅛ to ⅜; Birdseye, ⅝ to ⅞; Blue Tent, 2¾ to 3; Cape Copper, 31 to 32; Cedar Creek, 1 16ths to 3-16ths; Chontales, ⅛ to ⅝; Colorado United, 4¼ to 4¾; Don Pedro, ¼ to ½; Eberhardt and Aurora, 5⅛ to 6½; Exchequer, 1-16th to 3 16ths; Flagstaff, ⅛ to ¾; Frontino and Bolivia, 1⅞ to 2⅛; Hultafall, 4 to 5; I.X.L., 1-16th to 3-16ths; Javali, 8s. to 10s.; Kapanga, 1¼ to 1⅜; Last Chance, ⅞ to 1⅛; New Quebrada, 1⅞ to 2⅛; Oregon Pref., 4 to 4¼; Pestarena, 3s. 9d. to 4s. 3d.; Placerville, 2½ to 2¾; Port Phillip, 7-16ths to 9-16ths; Richmond Consolidated, 9⅛ to 9¾; St. John del Rey, 275 to 285; Sierra Buttes, 1½ to 2; South Aurora, 1-16th to 3-16ths; Tecoma, ⅛ to ¼; United Mexican, 3⅛ to 4.

In the Stock Exchange article of last week some remarks appeared tending to impugn the professional skill of Messrs. Daukes and Hitchins. The remarks were evidently written under a total misapprehension of the facts of the case, and we extremely regret their appearance, as well as their general tenor. It would seem that Mr. Daukes was not even present when the desultory conversation as to the power of water was raised by two engineers after the meeting of D'Eresby Consols was over. All that was really said in reference to Mr. Daukes was that that gentleman had devised a plan easily adapted for utilising water.

COLLIERIES.—We have no change of any importance to note in this share market during the past week. Transactions are few and far between, and there is, therefore, nothing to give rise to a change in prices. Business in the coal and iron trades is, if anything, improving, but the present is scarcely a time of the year when the coal markets are so active as they are at other seasons, so that any improvement at all may be reasonably hailed as a decided gain. Our competitors are worse off than we are, reports from America going to show that the coal and iron trades are in a very bad way, and prices so low that it is impossible to reduce them without involving dead loss to the producers. Our exports continue on a satisfactory scale, South Wales being especially busy in shipping coal to foreign ports, the outgoings for last week being fully up to those of the previous week. There has lately been a keen competition going on between Cardiff and Newport as to the relative values of each as shipping ports, and a Bill has recently been obtained authorising the construction of new junction line, which will put Newport into easy communication with the Rhymney Taff Vale, and, in fact, all the large South Wales coal producing districts. Newport, therefore, can now compete on more favourable terms with her rival shipping port, and it may be hoped that this competition will go far to benefit the colliery proprietors, by bringing down the cost of freight and shipping charges.

Numerous orders continue to come in for the Ynisedwyn Company's high class anthracite coal, and it is clear that the company could easily sell even considerably more than the present condition of the works will enable it to raise. This, however, is a very excellent fault, and has the advantage of securing a good price for all the supply. The Ynisedwyn Company's is so small (only 60,000*l.*), and the property is such a valuable one, that very large dividends may shortly be looked for. The Humber ports have been busy exporting fuel, the shipments last week amounting to 34,560 tons, the largest quantity cleared during the present season, and 13,892 tons above the corresponding week of last year. Lancashire reports are good, and Lancashire collieries are, therefore, looking up. We hear that the new works at Chapel House are now very nearly completed, and that already a larger output is being obtained. Chapel House ordinary shares should soon rise in price, particularly if, as seems to be anticipated, a dividend is declared during the present year. We are informed that almost the whole preference capital recently issued has been taken up, and the holders of it may congratulate themselves on having secured a favourable investment in what we believe to be one of the best collieries in the kingdom. The preference shares are at par (5*l.*), and the ordinary ones at 3 to 3¼. Altami closes at 3¼ to 3¾; there is no change to report in the company's trade. Llay Halls remain at 6 to 8, and if trade should improve as is expected they should be worth buying. Cardiff and Swansea shares are at ⅝ to ¾; New Sharlston, 3 to 4; Thorp's Gawber, 2¼ to 2¾.

The allotment letters of the North Wales Carriage and Wagon Company have this day been posted.

*** With this week's Journal a SUPPLEMENTAL SHEET is given, which contains—Original Correspondence: Our Eureka (Nevada) Correspondence (J. D. Power); the Emma Mine—the Comstock Bonanzas—One of the Bonanza Kings; Legitimate Mining, &c. (H. Sewell); the Hydraulic Mines of California and Chile—the Emma Mine (H. Sewell); Gold Mining in Chile (B. V. MacKenna); a New Patent for Manufacturing Brimstone; Bona Fide Gold Mining; Gold Mining; Don Pedro North del Rey Mining Company (C. Williams); Richmond Mining Company (J. Bayliss, R. W. Brereton); the Flagstaff Mining Company (W. Bredemeyer); Peace—with Honour (R. Tredinnick); the English Lead Trade (J. Owen); South Condurrow, and Wheal Grenville (J. H. Crofts); Pandora Mine; Pant-y-Mwyn Lead Mine (E. Jones); Cornish Mining—the Five-Weeks Month; Great Discovery of Silver-Lead Ore at the British Silver-Lead Mines, near Festiniog (J. L. M. Fraser); Rock-Boring Machinery—Schram's Claims (R. Schram); Light Railways for New Districts—the Scotch Mining Share Market—the Wild Duck, or Sportsman's Arms—Magnetic Compasses—Rotative Water-Pressure Blast-Engines—Self-Moving Engine and Stone-Breaker (*illustrated*)—Patent Matters—Meetings of South Condurrow, Great Holway, Tankerville, West Tankerville, South Tolcarne, Huntington, English and Australian, and other companies, &c.

ZINC ORES.

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LEAD ASHES, LEAD SLAGS, SULPHATE OF LEAD, HARD LEAD, BRASS SLAGS AND ASHES, COPPER REGULUS, MATTE, SCORIA, TIN ASHES, TERNE ASHES, &c., and MIXED ORES or REFUSE, containing LEAD, COPPER, TIN, or ANTIMONY.

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HENRY WIGGIN AND CO.
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NICKEL AND COBALT REFINERS
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Exhibition Prize Medal—New South Wales, 1877.
AUSTRALIAN TIN—"KANGAROO" BRAND.
Having recently succeeded in REFINING the AUSTRALIAN TIN to the HIGHEST PITCH OF PURITY, the Undersigned is prepared to SUPPLY an article equal to the BEST REFINED ENGLISH.
The uniform assay of the "Kangaroo" brand ranges from 99·70 to 99·90 pure tin. An exhaustive comparative trial of various brands of Australian tin (see annexed report) have proved the
"KANGAROO" BRAND
To be superior to all other Australian tin, and equal to best refined English.
COPY OF REPORT.
"Sydney Galvanising Works, Sydney, Oct. 1, 1875."
"DEAR SIR,—I have much pleasure in stating that I have found the tin smelted at the 'Kangaroo' Tin Smelting Works superior to any other Australian smelted tin I have used in my business up to the present time, and in no way inferior but quite equal to the celebrated 'Lamb and Flag' tin.
This opinion has been arrived at after several carefully executed practical tests, as well as from metallurgical assays.
"I am, dear Sir, yours faithfully,
"S. L. Bensusan, Esq." (Signed) S. ZOLLNER."
Messrs. JOHNSON, MATTHEY, AND CO., the well-known Assayers, report on 24th December, 1875, on a shipment ex Durham, 25 tons of "KANGAROO" TIN, 99·95 per cent. pure tin.
In ordering the "Kangaroo" brand the trade will henceforth ensure uniformity of quality, excellence of texture, and absolute freedom from impurity
"KANGAROO" TIN SMELTING WORKS.
Sydney, September, 1877. S. L. BENUSANS

WALLAROO COPPER.
MESSRS. JAMES AND SHAKSPEARE beg to give notice that their NEXT SALE will take place on Tuesday, the 20th inst., at Two P.M., at the Baltic Sale Room, Threadneedle-street, when they will OFFER SEVEN HUNDRED AND SIXTY SIX TONS in CAKES.
Catalogues may be obtained at their offices, 10, Austinfriars, E.C., London, and Slater-court, Castle-street, Liverpool; also of Mr. D. DOCKER, 38, Cannon-street, Birmingham.

BURRA BURRA COPPER—P.C.C. BRAND.
MESSRS. FRY, JAMES, AND CO. WILL SELL, BY AUCTION, on the 20th instant, at the Baltic Sale Rooms, ONE HUNDRED AND FIFTY TONS of CAKES and INGOTS.
Catalogues at 21, Gresham House, Old Broad-street, E.C.

ASBESTOS.
THE BEST MATERIAL for the STEAM JOINTS of LOCOMOTIVES, MARINE and STATIONARY ENGINES BOILERS, &c.
It is manufactured entirely pure, and of the best and strongest qualities, into MILLBOARD, for STEAM, WATER, GAS, and ACID JOINTS,
Further particulars and prices of the undersigned,
SMITH, FLEMING, AND CO.,
17 AND 18, LEADENHALL STREET
LONDON, E.C.

Notices to Correspondents.

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt; it then forms an accumulating useful work of reference.

Rock-Drills.—We cannot publish the letter of "Alpha" without the writer's name being appended. Mr. Schram has signed his letter which appears in another column, and it would not be fair to insert further communications of a personal nature without being duly authenticated.

Received,—"G. S." (Brisbane)—"M. W." (Boston)—"J. M."—"R. N."—"T. G."—"A. T. D." (Greenwich)—"G. R."—"A. W. S."—"Reader" (Bristol)—"Shareholder" (United Mexican)—"A. W." (Carlisle): We will endeavour to do so—"G. M." (Birmingham)—"Shareholder" (Rookhope)—"An Old Subscriber" (Newlyn)—"E. M." (Goole).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, AUGUST 10, 1878.

THE LONDON COAL DUES.

Another effort we find is about to be made to perpetuate the City dues, for constructing a bridge or bridges over the Thames, rendered necessary by the rapidly accumulating traffic of late years. The Act expires in 1889, and the erection of a new bridge has been projected that has received the sanction of the Metropolitan Board of Works, and it is for this purpose that it has been resolved to make application to Parliament to continue that portion of the coal dues, together with the wine dues, over which the Board has control to the end of the year 1900. With respect to these taxes on the two imports, it may be said that the Corporation of the City of London collect the dues on all coal entering within the limits of the City, although not necessarily consumed inside the boundary, which amounts to 1s. 1d. per ton. Of the 1s. 1d. so charged 4d. is taken by the Corporation for improvements within their immediate jurisdiction, whilst the remaining 9d., as well as the wine dues, is handed over to the Metropolitan Board of Works on account of the Thames Embankment and the General Metropolitan Improvement Account. The moneys so levied have, doubtless, been well laid out by those on whom the duties of expending them necessarily devolved during the last few years in particular, when there was completed the Cannon-street improvements, the Holborn Viaduct and its approaches, and the Thames Embankment. The proceeds of 1889 are, however, to be placed at the disposal of a joint committee of the two bodies for freeing from toll the Kew and other bridges. All these are certainly desirable objects, and so far have been ably carried out. But why coals above all other commodities should be taxed for City improvements we are at a loss to understand, for next to food itself it is the most important necessity required by all classes, and in the winter seasons the price of it has pressed most heavily on the poorest inhabitants of the Metropolis, and we have it on high authority has added considerably to the mortality. But the tax has been so long in existence that the City authorities having all the machinery at hand may consider that it would be a pity to take it out of their hands, and hence the desire to have it continued, as it has done much to embellish the Metropolis, for many of the oldest churches in it owe their origin to the tax on coal. From May 1, 1670, to June 24, 1677, there was a tax of 2s. a chaldron on the coal coming into the City for the purpose of building St. Paul's Cathedral, 1s. per ton having being previously in force after the Great Fire for rebuilding London, and this for a short time was increased to 3s. a chaldron. Fifty-two parish churches were also built from the coal dues.

During the eighteenth century the duties were continued principally for church-building purposes, so that in 1775 the charge was 8s. on every chaldron, and a dozen years afterwards another 10d. was added. The French war led to a still further increase in the tax, which in 1809 was no less than 12s. 6d. per chaldron, the average price of coal at that time to consumers having been 54s. 6d. per chaldron. From that time there was a gradual decline in the dues, which in 1831 were 6s. per chaldron. In the same year, however, a marked change took place; the chaldron as a standard of measure was abrogated, and the charge reduced to 1s. 1d. per ton, which is the present tax on all coal brought into London, and within certain limits by railway, canal, and road, &c. But the inhabitants, more especially those living some miles out of the boundary of the City, have strongly opposed the tax as unfair. Towards the close of 1874, at the request of the Metropolitan Board, Sir S. Northcote asked Parliament to extend the dues on coal and wine beyond 1889, but this was refused, and it was felt that those residing some 15 or 16 miles outside the City radius had just cause for opposing a tax in which they were no way benefited or interested, and in the expenditure of which they had no voice. The only reason, therefore, that we can see at all in favour of the imposition of the tax is that it is the oldest known mode of raising money in the City without levying a rate. Now, coal is a luxury for the poor, and one that has to be carefully nursed; but it is also an essential for manufacturing and other purposes, whilst wine, which pays as dues 4s. 9½d. on the tun of 252 gallons, is an article principally consumed by the wealthy classes, and if the tax is increased or continued for some years to come it would not be felt by those who pay it.

Cheap coal, however, is of essential importance for all classes, for the tax on it presses both directly and indirectly. The householder has to pay it on what he consumes in his own grate, and then again in what he pays for his gas, as well as for articles of consumption in which coal is extensively used. Manufacturers suffer much from the impost, and some years since it was stated on the part of the Thames Shipbuilding Company that the tax cost them 3000*l.* a year. This of course gave other shipbuilding ports, such as Glasgow, where coal has only to be brought a short distance, and is free from rating, a great advantage over the metropolitan yards. But free trade in coal in the Metropolis would make it cheaper than the 13d. were that tax abolished; not only so, but the poorer classes would be able to obtain a much better quality at a lower rate. At the present time the London trade is in the hands of a comparatively few persons who are in a position to make much higher charges than what they cost at the pits would warrant. For months past colliery owners sending extensively to London state that they are losing money by the business, but such is not the case with the merchants, who may be said to have a monopoly of the trade, and who make the customer pay three times what the coal costs at the collieries. The poor consumer is even worse off, for he has to purchase from a dealer, who buys the cheapest and worst stuff he can get, and sells much higher, of course, than the merchant does for a better article, besides there is the chance of short weight. The railway companies, too, find it to their advantage to aid the large merchants, for we are told by Mr. Cockerill that as they have only a limited space at command they naturally allot it to their largest and best customers, who have the facilities for storing coal that is practically denied to others. Then the colliery owners pay the carriage and dues to the railway companies, and of course it is far more convenient and economical to draw those charges from a few well-known firms than from a good many, some of them, perhaps, small and in not very flourishing circumstances. But let the trade be once thrown open by doing away with the dues and allowing all coalowners, small as well as large, the opportunity of freely competing in the London market, then we should soon find the number of colliery proprietors selling direct to the consumers greatly increased, the price of coal much lower than would otherwise be the case, and the profits of merchants far more moderate than they have hitherto been. Not only so, but the poorest consumers would be able to get better value for their money, for many small colliery owners would only be too glad to establish small depôts where a hundredweight or two could be purchased. But so long as the tax remains and the greater part of the trade continues in the hands of a few merchants then coal will be higher than it ought to be in comparison with what is paid for it at the pits. On the other hand, a removal of the tax and the introduction of what may be termed free trade in coal would make the latter much cheaper to the gas companies, manufacturers, and every class of consumers, so that the results would be much greater than the mere reduction of the price by 13d. a ton would lead one to expect at a mere glance at the matter. We should then have a good deal more coal sold direct from the coalowner to the consumer than at present, and so do away with the profit of the middleman, which has, as a rule, been the largest. Just now a clear profit of 6d. a ton would be looked upon as an excellent one by our colliery owners, but we know very well it would be very far from satisfying the merchants. The mere fact that the dues are easily and economically collected is no reason whatever for their continuance, as they are unfair to the residents inside the metropolitan area, and more so to those who live many miles away, and cannot be said to reap any advantage whatever from the metropolitan improvements. It is, therefore, to be hoped that the attempt about to be made to have the tax continued to 1900 will not succeed, and but little pressure, we believe, will be required to cause Parliament to again refuse to continue a monopoly that is opposed to the interests and comforts of the great bulk of the inhabitants at present resident within the area of the City of London coal dues.

STEEL RAIL RENEWALS.

A statement of considerable interest to the home iron trade was made at the recent half-yearly meeting of the Great Eastern Railway Company by the highly intelligent Chairman of that apparently now improving undertaking. It has been the fashion to decry and sneer at the Great Eastern as a well-nigh hopeless concern; and no doubt it has been greatly mismanaged in the past, but a capable and honest board appears to be now at the head of affairs, and a solid improvement is taking place in the administration of the property. Thus, in the first half of 1878 a fair and proper proportion of locomotives were rebuilt at the cost of revenue, and the permanent way is also being brought into a thoroughly sound and efficient state. During the current half-year, 1879, 1880, and 1881, it is proposed to relay 210 miles of single line with steel rails; and the directors, with a wise and prudent foresight, have contracted for the supply of all this *matériel*, so that even although prices should experience a sensible advance, the company will be assured the delivery of very substantial quantities of steel rails for three years outright at the very moderate rates now current. The last steel rail contract concluded by the Great Eastern was entered into, it may be parenthetically observed, at 5*l.* 16s. per ton. The freedom with which the Great Eastern directors have been letting steel rail contracts of late clearly indicates that they, at any rate, are of opinion that prices in the iron trade—and the expression "iron," of course, virtually embraces steel—have fallen to their lowest point, and that, if anything, they are likely to advance. This is certainly a cheering circumstance so far as it goes. The Great Eastern board cannot be said to possess the attribute of infallibility; still they are not likely to have given out large steel contracts without due consideration, and without having accumulated a certain amount of information upon the subject.

The course which the Great Eastern board has pursued illustrates the justice of an argument which we have more than once employed during the last five trying years. We have not hesitated to express our opinion that the low prices which have prevailed would, at any rate, have the effect of materially stimulating consumption; and the Great Eastern case proves the soundness of our view of matters. The Great Eastern has required unusually large quantities of steel rails to bring its permanent way into a better condition; but we cannot doubt that the course taken by the Great Eastern board has been pursued, to a greater or less extent, by other railway administrations both on the Continent of Europe and in the United States of America. History repeats itself, and the very adversity of the iron trade has probably more than once been the foundation of its future prosperity. But there appears one very serious difficulty in the very animation which begins to characterise the demand for steel rails. Steel rails are ordered by the railway companies of Great Britain and other countries because they last ever so much longer than iron rails; and, therefore, once laid down, they are not likely to be renewed with fresh steel rails for a well-nigh indefinite period. When once the busiest and most prosperous of our principal home systems have been steel-railed throughout, must not the demand for steel rails on home account begin to decline? A certain enquiry may continue for steel rails on foreign account for a long time to come; but to ensure markets for our steel rails abroad, must they not be offered upon moderate terms? These are very serious questions for the consideration of those who have applied their capital to the production of steel rails.

KIMMERIDGE CLAY.

Few of our minerals are less known generally, either as regards their nature and value, than the Kimmeridge clay; which, so far as we can learn is only worked at two or three places. One of the principal members of the upper oolite, the clay, rests upon the upper calcareous grit and the coral rag. The latter is so termed from the abundance of coral fossils that are found in the beds, being placed just as they grew at the bottom of the sea long ages ago, forming masses from 12 to 14 ft. in thickness, and the same as now exist in the Pacific and Indian Oceans. The southern extremity is near to the coast at Weymouth, and the beds extend throughout a great part of England to the northern part of Yorkshire. In most places where that well-known formation is found the probability is that above it will be found the Kimmeridge clay. At Hunstanton the clay exists at a moderate depth, and it has been proposed to sink through it in the expectation of meeting with the coal measures. In connection with the "sponge-gravel" beds at Coxwell, near Farringdon, it has been found that there is a plateau of the gravel based on the Kimmeridge clay, which is not more than from 25 to 40 feet from the surface, whilst at to Weymouth the clay has been raised, and in doing so a large saurian limb bone was found, being a left humerus. In some places the Kimmeridge clay, which appears to be an ordinary argillaceous deposit, is several hundred feet thick, some of it containing a good many fossils. In the Isle of Purbeck it appears in the cliffs as a laminated clay passing into bituminous shale imperfectly combustible, and known in some localities as Kimmeridge coal. For many years past it has been worked extensively in the South of England both for gas-making purposes and also for distilling into paraffin. At Kimmeridge Bay, in the Isle of Purbeck, there is a very fine section that has been worked for converting into gas, of which a ton will give an average of about 9000 cubic feet, being only about 15 per cent. less than is obtained from good Silkstone coal. Still, extensive as is the area covered by this valuable formation, and so well adapted for making gas and oil, it is rather surprising to find that it has not been worked more extensively, more particularly in those localities far removed from any coal field, and where the price of coal must be very high. But there is another purpose for which the Kimmeridge clay has been found to be highly valuable, and in all likelihood will be made available.

For many years we know that a great deal of attention has been paid to the filtering of water, and several systems have been brought under the notice of the public. Charcoal in various ways has been found a valuable agent with gravel and sponge. Then we have had syphon filters divided into two compartments, in which the water passes through compressed sponge and a reservoir of charcoal. But one of the latest and most valuable inventions appears to be that now known as "sanitary carbon," which is the residuum of Kimmeridge clay after distillation. We need scarcely say that the refuse of the clay after distillation has hitherto been entirely useless, and has been an ugly heap wherever it has been worked. Experiments made have clearly shown that it contains all the properties of animal charcoal, which is undoubtedly the best but at the same time the dearest we have. The refuse has been experimented upon in many ways, and where water purposely made impure with the most opposite ingredients of sewage and other matter the outcome after undergoing the process of filtration through the sanitary carbon or refuse Kimmeridge clay has been a perfectly bright transparent and scentless water, entirely despoiled of all organic and other matter, fully equalled to what is required by the Rivers Pollution Commissioners, and superior to a great deal of what is used for drinking purposes. The only thing that appears necessary to bring the sanitary carbon into tolerably general use is the price, and there certainly does not appear any reason why it should not be sold very low. But it too often happens that a sudden demand even for a worthless article is taken advantage of by those who have it in their possession. Still as there are such large deposits of it there should be no difficulty in leasing the clay, and then extracting the oil from it, for there could be no doubt as to the result. We have had companies formed for all manner of purposes, practical and impracticable, that have had little to recommend them apart from the promises held out by promoters, but we have never heard of anyone spiritedly taking in hand the making of gas and the extracting of paraffin from the Kimmeridge clay. Indeed we are not aware that it has ever been brought under the notice of the public in any shape whatever, excepting in one instance, and that in a manner which does not appear to have been at all effectual in securing even ordinary attention. But the importance of the Kimmeridge clay for the purposes we have named cannot be over estimated, more especially in its relation to the filtering of water, which is now one of the greatest questions of the day.

THE COAL AND IRON OF THE WORLD.

For some years past the name of Dr. J. Pechar, of Teplitz, has been familiar to the readers of the *Mining Journal* from the notices which have from time to time appeared of his valuable contributions to the literature of the coal and iron industries, and in connection with the present International Exhibition at Paris he has now published (through Messrs. John Heywood, of Manchester, and Simpkin, Marshall, and Co., of London) an authorised English edition of his work on "Coal and Iron in all Countries of the World." From Dr. Pechar's position of managing director of the Dux-Bodenbach Railway—a line passing through that district of Bohemia which contains the extensive and well-known Bohemian brown coal or lignite measures—he is naturally much interested in the subject, and possesses great facilities for collecting information, and there can be no doubt that he has used his facilities to the best advantage.

With regard to Great Britain, it appears that she has 315,325 square kilometres of surface for 32,800,000 inhabitants, and Dr. Pechar mentions that documentary evidence of the use of pit coal in England is not found before the 13th century. Henry III. gave leave to the inhabitants of Newcastle-on-Tyne to mine stone and coal, and to make good use of them. In a country which still contains coal seams cropping out at the surface, although they may not be worth getting, the value and application of mineral fuel was doubtless known many centuries before, and the assertions that the Romans on conquering England already found coal mining carried on, although historical proof cannot be obtained for it, is very probably true. It was thus that coal mining commenced in a country at present producing more than 130,000,000 tons annually, employing a steam-power which may be put down as equal to the work of about 800,000,000 people, and which surpasses in the extent, as well as in the multiplicity of its industries, all other countries. Dr. Pechar remarks that the great heating power and available quantity of coal in Great Britain has caused the existing lignite or brown coal and the peat fields to be neglected, which under the circumstances may be correct from an economical point of view. Some isolated cases excepted, English brown coal is of inferior quality, and does not admit of even a distant comparison with the excellent quality found in the famous north-western basin of Bohemia. The best known source of lignite is the basin of Bovey in Dorsetshire, which has been worked for the last 100 years, and contains 10 seams of a total thickness of about 30 metres. Lignite is also found near Bothfield, Heathfield, Downholme, and Hudswell, in Sussex; in Ireland, near Lough Neagh (three seams, with a total of 10 metres), Ballintoy (7 metres), and Bally Macadam; in Scotland, at the mouth of the River Brora; on the Isles of Skye and Wight, and in other places. Extensive peat layers exist in the Scotch Highlands, and also particularly in Ireland, where it is often somewhat difficult to know where peat ends and brown coal begins. It is mostly these deposits which are used in the application of peat, or the earthy turf-like brown coal, to the manufacture by distilation of paraffin and stearme, of photogen, and solar oil. As to the uses to which British coal is applied it appears that 34½ per cent. is consumed for the iron industry, nearly 22 per cent. for factories, nearly 16½ for dwelling-houses, about 6½ per cent. for gas and waterworks, over 6½ per cent. for the mining industry, about 6½ per cent. for steamers, 1¾ per cent. for railways, ¾ per cent. for copper works, and ¾ per cent. for sundries, the remaining 10½ per cent. being exported. As to the future Dr. Pechar says that the position of the coal trade is now everywhere most unfavourable, Great Britain even not excepted. It is to be expected, however, that the English coal trade will recover from the losses already sustained, or from those which may yet be in store, more quickly than that of most other countries which have suffered in an equal degree. Exceedingly great facilities for export, abundance of capital, reputation of long standing, and efficient labour, together with a sound commercial policy of the Government, offer the best guarantee for the vigorous development of the English coal trade.

After remarking at equal length on the position and prospects of the iron trade, Dr. Pechar gives similar interesting details of the coal and iron trades and resources of France, Belgium, Germany, Austro-Hungary, Russia, Sweden, Spain, Portugal, Italy, Switzerland, Holland, Denmark, Norway, Turkey, Greece, America, Asia, Africa, Australia, and Arctic territories, but the noticeof these must be reserved for next week. The volume is altogether a valuable and important one, and is worthy of the careful study of all connected with the branches of industry treated of, whether at home or abroad

MINING ENGINEERING EXPERIENCE.

The value of the information embodied in the papers read before the various scientific societies connected with the several branches of our national industry can scarcely be over-estimated, and the volume of Transactions of the South Staffordshire and East Worcestershire Institute of Mining Engineers just issued proves how much good may be done by these institutions. The report of the council shows that at the close of the Institute's ninth year of existence it is in a prosperous and flourishing condition. The number of members shows a satisfactory increase during the year, and the cash balance has been increased by 115*l.* 8s. 2d., the total assets now being 598*l.* 19s., free of liabilities. The excursions of the year have been instructive and pleasurable, and the manner in which the working of the Institute is recorded in the Transactions reflects the highest credit upon Mr. Alex. Smith, C.E. (the secretary), by whom they are edited. The inaugural address of the new president, Mr. Thos. Parton, F.G.S., was an able one, and at its conclusion an interesting duty was performed by Mr. Henry Johnson, sen.—that of presenting to the Institute a portrait of Mr. Brooke Ridgway Smith, a member of the Institute, and one of the earliest mine surveyors in the district. This gentleman is the son of a solicitor who at the beginning of the century had a large practice at Newcastle-under-Lyme, and having no taste for the law was in 1818 articled to Mr. William Fowler, of Erdington, to learn land surveying. When out of his articles he turned his attention to underground surveying and plotting on paper, as is now universally adopted. Previous to that time (1824) pits were latched with a three-legged stool, a ball of clay, and a piece of string; more recently with a box dial placed on a stool, a line and tallies to mark the length; then the diallings were pegged out on the surface, the tallies withdrawn from the string, and so the only record that existed afterwards was the pegs in the land, and these in their turn were lost or destroyed, and so all records of the workings gone, much to the annoyance and trouble of those who are now in practice as mining engineers in the district. Mr. Johnson exhibited an admirably executed plan by Mr. Smith in 1828, much to the astonishment of the old mine bailiffs of the time.

Among the papers included in the Transactions is one by Mr

Henry Davey, on "Some Improvements in Pumping Machinery," in which he showed that, apart from the saving of fuel, there is an absolute economy in using the best possible engine, owing to the saving effected in wear and tear and to the smaller number of boilers required. Then there is an interesting paper on Messrs. Hayward Tyler and Co.'s pumping-engines and hot-air engines. Mr. George Jones, of Dudley, contributed an interesting paper on "Steam-Power *versus* Water-Power for the Smelting of Iron." Next there are the proceedings of the general meeting, including Mr. Blakemore's paper on the "Faults of the South Staffordshire Coal Fields," the paper by Mr. Henry Johnson, jun., on "Improvements in the Construction and Lubrication of Colliery Tubs and Wagons." The papers read at subsequent meetings, and also contained in the volume, include "An Enquiry into the Origin, Principle, Construction, and Use of the Thermometer," by Mr. J. Bowen; on an "Improved Colliery Wagon," by Messrs. Johnson, Cookson, and Co.; on the "Boundary Faults of the South Staffordshire Coal Field," by Mr. W. Blakemore; on "Improved Winding and Capstan Engines," by Mr. Alex. Smith, C.E.; "Remarks on some of the Central Faults of the South Staffordshire Coal Field," by Mr. W. Blakemore; on the "Utility of Mining Institutes, by Mr. Alex. Smith, C.E.—a most interesting paper; on the "Wardha Coal Fields," and the result of his Indian explorations, by Mr. Walter Ness, the information in which was communicated to the Institute in the form of an address; and on "Explosions in Mines," by Mr. Parton. Each paper is followed by a report of the discussion which arose upon it, and the whole is rendered much more interesting by the admirable diagrams and chromo-lithographs given in elucidation of the subjects dealt with. Mr. Alex. Smith remarked that when he undertook the secretaryship he had the ambition to think that he could make this institute one of the leading scientific societies in the kingdom, and, to judge from the present volume of Transactions, he certainly appears to be doing much in that direction.

ROYAL SCHOOL OF MINES.—At the annual meeting of the Council of the above institution, held in Jermyn-street, the prizes were awarded as follows:—

The two Royal Scholarships, of 15*l.* each, for first year's students, to Mr. R. G. SCOTT and Mr. W. CROSS.

The Royal Scholarship, of 25*l.*, to Mr. R. LANCASTER.

The Edward Forbes medal and prize of books, to Mr. P. F. FRANKLAND.

The De la Beche medal and prize of books, to Mr. F. G. MILLS.

The Murchison medal and prize of books, to Mr. M. TERRERO.

An extra medal to SYED ALI.

AMERICAN IRON AND STEEL ASSOCIATION.—The annual report of the secretary (Mr. JAMES M. SWANK) of the American Iron and Steel Association, just presented to the members, is really a model of admirable and systematic arrangement of an abundance of most valuable trade information, which could only have been got together by an immense amount of labour and research. Not only has careful watch been kept over all that has been taking place in the American home trade, but Mr. Swank has likewise given the gist of the information which is to be found in the principal societies' proceedings and technical periodicals both of England and Continental Europe, so far as it has any bearing upon the iron and steel trades. It appears from the general summary that the world's production of pig-iron and coal was 13,358,628 tons of the former and 285,368,376 tons of the latter. Of the pig-iron, England produced 6,300,000 tons; United States, 5,000,000 tons; Germany, 1,566,600 tons; France, 1,322,869 tons; Belgium, 418,366 tons; and Austro-Hungary, 472,285 tons. Of coal, England has produced 134,179,968 tons; United States, 50,000,000; Germany, 48,337,950 tons; France, 16,773,779 tons; Belgium, 14,099,281 tons; and Austro-Hungary, 12,852,048 tons. We shall, as usual, give lengthened extracts from the report as opportunity offers.

THE TRAMWAYS BILL.—It is well known that when Lord Norton was at the Board of Trade he took great pains to draft the Tramways Bill, as it was orignally brought into the House of Lords, but which has subsequently been mutilated. In the debate on Tuesday his lordship said: He must say that the promoters of these Tramways Bills and Provisional Orders had been hardly dealt with. It was not proposed to give any general powers of using steam on tramways, and when any locality unanimously desired steam it was a strong interference by Parliament to say they should not have it. But striking out these clauses would probably have the contrary effect to that intended—it would lead to places unanimously wanting to use steam doing so without Parliamentary sanction—that is, without those conditions and restrictions and regulations which those clauses would provide. This had already began to be the case to a considerable extent, and what the House was now doing would lead to much more unregulated practices. The Swansea judgment confirmed these views. When parties were aggrieved by a private nuisance, as in that case, there was a remedy. When all agreed there would be no prosecution. The hardship of the present treatment, only slightly mitigated by allowing the promoters to come again for further disappointment next year without depositing more than they had already, was clear. The Tramways Act of 1870 contemplated the use of steam and other than animal power. In 1876 the Wantage and Vale of Clyde Acts granted it, and that success led to many applications in 1877. These were delayed expressly for further enquiry. A House of Commons Committee made the enquiry and reported favourably, suggesting conditions and recommending a Bill to enable the Board of Trade to license experiments. A Bill in each House was brought in, but allowed to drop. Another Select Committee of the House of Commons this year reported that they had overwhelming evidence that steam in certain circumstances, and under stringent conditions, ought to be permitted in places desiring it. The almost breach of promise involved in it now, at the last, rejecting these claims must lead to despair of any Parliamentary sanction, and to action without it. Those who argued that the street in towns were the thoroughfares of the public at large argued against tramways altogether, not against the particular use of steam. The railways object on the ground of competition—an objection they never admitted on the part of the roads against themselves. But the present question was simply of steam with or without restrictions in places where no prosecution was feared.

DAMAGES FOR THE FLOODING OF A COLLIERY.—Lord Justice Baggallay has been engaged at the Leeds Assizes for the last three days in hearing an action in which damages were sought from the Dewsbury Waterworks Board for the flooding of a colliery. The plaintiff, Mr. Jaggar, is the owner of a colliery at Flocton Moor Head, near Huddersfield, and it was alleged that in December, 1874, through the bursting of the conduits of the Dewsbury and Heckmondwike Waterworks, carrying the water to Dewsbury, his mines were flooded. For many years the plaintiff pumped out of his pit 5000 gallons of water daily, and this was done in three hours each day. This state of things lasted till Dec. 18, 1874. On that morning one of the plaintiff's sons, who had been in the habit of going down to the bottom of the pit for years, went down and found himself in 2 ft. of water. That was the first time he had ever known any water to be above the sump-hole. The water came in the pit at such a rate that the old pump was not sufficient to keep the water down, although it was worked for all the day instead of for only the three hour in each day, as had been the case previously. A larger pump was fixed, but it was of no use, for the water gained ground every day. When the water had risen 80 feet, and everything had been done to stop the flow of water, the pit was abandoned. No one could ascertain the cause of the water flowing into the pit until a cow made the discovery. The conduit, which was only one brick thick, was built only 9 inches over an old day hole, the top of which had fallen in. The cow in stepping into the conduit put its foot through the brickwork, and made the leak plain to everybody. Through this leakage and other undiscovered leakages it was alleged that the water got into the plaintiff's pit. In support of this it was stated that before the leakage was repaired not only was the pit flooded but the inhabitants of Dewsbury and Heckmondwike were complaining of the scarcity of water. As soon as the leak was mended the plaintiff got the upper hand of the water, and he was now able to work the pit, although he was at the trouble of pumping 30,000 gallons of water out of it every day. A large number of witnesses were called to speak to the above facts, and yesterday Mr. Wills (for the defendants) said his clients had put their case in his hands, and after hearing the plaintiff's case he thought that the theory he was going to put forward he would not be able to sustain. He, therefore, consented to a verdict for the plaintiff for 1250*l.*, for which judgment was accordingly entered.

REPORT FROM CORNWALL.

Aug. 8—That there should be no improvement in the tin market is only what was to be expected after the recent statistics that have been made public. While our mines are straining every nerve to meet their cost, and if possible declare a dividend by raising large quantities of tin, the consumption utterly fails to keep pace with the enhanced supply, and will do so we are afraid for some little time to come. Were there no prospect of the demand increasing two courses only would remain open to us, either to stop altogether or to reduce the cost of production so far as to enable us to drive our competitors out of the field. Sooner or later, however, consumption must increase, and meanwhile very substantial progress is being made towards the latter consummation.

Wheal Eliza has declared a dividend of 30 per cent. for the six months, with every prospect of raising this to 35 per cent. by the end of the year. This mine will serve as a very fair illustration of the kind of progress we mean. Here is a result attained not so much by the richness of the stuff—though it is rich—as by the economy used in treating it, for Capt. Williams is now returning black tin at a total cost of 23*l.* or 24*l.* per ton, and actually hopes ere long to bring this down to 20*l.* Either result would have been thought ridiculously impossible a few years since, but this shows what our mine managers can do when they are put on their mettle, and when they are not content to stick to old ways from no other reason apparently than because they are old. It is impossible to crush an industry that shows such adaptability and recuperative power.

But we have another reason for referring to Wheal Eliza and Capt. Williams. A few days longer will see at work at this mine an entirely new form of dressing apparatus, which Capt. Williams has just invented, and in which he has introduced a principle entirely new to Cornish mining. Into the details of the apparatus which has yet to be patented we cannot of course go, but this much we may say, that it is intended to take the stuff direct from the stamps and deal with it at one operation, dispensing altogether with buddling, framing, trunking, and the like; that it is so far from being complicated that it may be made by any mine carpenter and smith, that it is far more compact than any form of dressing apparatus ever yet introduced, and that it is so cheap that 50s. will cover the cost of making one to deal with the stuff for 10 or 12 heads of stamps. Here, then, is a machine that if it at all approaches expectations, and Capt. Williams is a cautious, shrewd, and a thoroughly practical man, will utterly revolutionise tin dressing and reduce the amount of manual operations therein to the very barest minimum. But more of this anon.

Wheal Owles still continues to attract a good deal of attention, and so far as can be judged the probability is that the mine will be kept in work, but divided into 1000 shares instead of 80. A lively meeting is anticipated at West Seton to-morrow, and a determined effort is in preparation to effect a change of management. The mine is not looking at all as it should, and there is a good deal of talk as to the money that might be saved by making a thorough change in the working. A great deal depends, however, on the action of the shareholders, who are not inclined to change for the mere sake of change, but wish to see their way clearly to some results.

The clay trade is fearfully depressed. So far as we are able to ascertain the production is now really greater than ever it was, but the bulk of the produce is sold, if not absolutely at a loss, at prices that are wholly unremunerative. The reason of this is stated to be the necessity the merchants are under to keep up their business connections. There is no monopoly in the clay trade, but a good many people must wish that there were.

By the death of Capt. James Richards, so long connected, in fact, identified, with the Devon Great Consols, the West has lost one of its best known and most skilful miners. For several years he, as the representative of this once famous mine, was accustomed to take the chair at the ticketing dinners, a position which belongs of right to the agent of the mine which sells the largest quantity of ore, as Devon Consols Mine for many a long year never failed to do. Capt. Richards was well known throughout the mining community—none better—and his advice and opinion were always highly valued. Disease had laid him by for some considerable time, however, and he has died at the comparatively early age of 62. He saw the rise of the fortunes of Devon Consols; he conducted its affairs while it was at the zenith of its prosperity, and he lived to see its decline—a great grief to him, so closely were his sympathies and hopes bound up with its prosperity. Perhaps, however, of it as of him, the motto will be "*Resurgam.*"

REPORT FROM NORTH WALES, SALOP, AND CARDIGAN.

Aug. 8.—One result of the depression in the slate trade is the discharge of the men from some of the slate quarries in Nantlle. This district was the first to suffer, and reduce the wages of the men, and the effect of the continuous depression is the discharge of men from some of the minor quarries. Meanwhile, with a view to the inevitable revival of the slate trade after a time, slate trials and young quarries are progressing. I referred last week to some that were opening out in the Llangynog district; several of these promise well, having an inexhaustible supply of fine, good, sound slate rock. In Carmarthenshire the young slate quarry enterprises look hopeful. At the Cleddau Valley, or Llwyn Rebo, as it is locally called, the lower tunnel has penetrated some good grey and green slate rock, and the young quarries on the Whitland and Cardigan Railway are opening out well. The railway just mentioned, which is only completed to Crymmach Arms, is to be completed to Cardigan, which will place the slate and slab quarries near the coast in connection with the market, and altogether it is to be hoped that the impression that slate quarries are not successful in South Wales will be proved to be true only in the past. Speaking of Carmarthenshire, although the county lies outside my district, yet in its lead mines and slate quarries it seems more closely allied with Cardigan and the North than with the great coal-producing regions of the South. I notice with pleasure the resuscitation with some *éclat* of the Cystanog Mine, under the name of the Grand Duchess Silver-Lead and Barytes Mine, near Carmarthen. The geological formation is similar to that portion of the lead mining district of Cardigan, and I hope the undertaking may succeed. Hitherto the only lead mines of importance have been the Nant-y-Mwyn, between Llanwrtyd and Llandovery, and the Llanfyrnach, on the little railway before alluded to. Frequently passing along the Vale of Towy, I have regretted that explorations were not more systematically pursued on both sides of that river. I notice, also, considerable mining activity in new mining enterprises in Flintshire and Denbighshire, and altogether Wales occupies a prominent position just now in mining matters, one noticeable feature of the position being the grandeur of the names given to the new undertakings.

Two correspondents have done me the honour to notice my suppositious estimates of the costs of working a lead mine up to a certain point, but both almost confine themselves to the cost of the London management. I may say with reference to "Shareholder," that I should be surprised if 743*l.* 14s. 7d. covers the whole cost of the items enumerated under this head in the case of the Van Mines, but it will be satisfactory to know that it does. In reply to Messrs. Watson's statement that the local management of the D'Eresby Mountain costs only 100*l.* a year, I would observe that if this is all that Capts. Roberts and Bennetts have had between them, less sundry inevitable expenses, it is no wonder they have both tried lately to better their position. But my estimate was for a mine in full work, and for the workmen enumerated in addition to the staff. Finally, as the Van has been cited as an illustration, I would point out that the average cost of stoping at that mine is nearly 80s. per fathom, against 50s. quoted by me. Should my supposed mine cost even 70s. per fathom for stoping, how much would be left for dividends, even if you added to the returns an excess of 750*l.* from the London management? It is wrong to say that the Van lode is exceptionally rich. It is not so. A large portion of the vein stuff is exceptionally poor. Indeed, I should not be far off the truth if I were to add that the profits of that mine are largely made from ores thrown away at some other mines. It is perfection of machinery and excellence of management that make it pay, and will continue to do so in spite of the depreciatory remarks of Mr. Tredinnick and others in recent numbers of the Journal.

The trade in agricultural lime has revived somewhat during the summer months. Many farmers using it largely in place of farmyard manure, of which there has not been a sufficiency, owing to the poorness of several crops, especially the turnip crop last year, but the trade in limestone for fluxing purposes is almost at a standstill.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

August 8.—There is no conspicuous change in the state of the coal and iron trades this week. It may be mentioned, however, that the reduction by Messrs. Walker, merchants, in galvanised iron announced last week will affect the foreign customers of that firm chiefly. No other alteration in prices is expected as the result.

Upon 'Change in Wolverhampton, on Wednesday, prices were strengthened by the fact that a broker from another district was negociating with a large pig iron firm in South Staffordshire for the purchase of 2000 tons. He had asked for a quotation for 4000 tons, but the firm declined to quote for above half the quantity on account of their make being sold forward to the end of the year. The broker states that he is acting for a London syndicate, which has been formed to buy up the stocks of pigs in hand in the Cleveland district, and also 25,000 tons of Staffordshire pigs.

A meeting of the creditors of Mr. Benjamin Whitehouse, trading as H. B. Whitehouse and Son, of the Prior Field Furnaces, Deepfields, and colliery proprietor, was held at the Queen's Hotel, Birmingham, on Monday. The statement of affairs showed unsecured creditors, 14,392*l.*; creditors fully secured, 55,846*l.*; less estimated value of securities, 64,707*l.*; creditors partly secured, 17,912*l.*; estimated value of securities, 7965*l.*; other liabilities, 1137*l.*; creditors for rent, taxes, and wages, 4302*l.*; liabilities on bills discounted, 1761*l.*; total debts, 25,477*l.* The assets were:—Stock in trade, 4561*l.*; book debts estimated at 1216*l.*; surplus from securities 8860*l.*, less creditors to be paid in full 4302*l.*; cash, farming stock, furniture, and property, 4701*l.*; total assets, 15,036*l.* The receivers' report stated that Mr. Whitehouse commenced business on his sole account in 1869, two years before his father's death with an apparent balance to his credit of 8457*l.*, but really burdened with family and other liabilities amounting to 20,000*l.* At that time he was without working capital, having a total of liabilities of about 59,000*l.* For the first four years, including 1873 operations were fairly remunerative. Owing, however, to disadvantageous contracts the good trade of 1873 was insufficient to place the firm on a sound financial footing. Since then, 1874 and every succeeding year had exhibited a constant and increasing loss. The working capital had long ago been entirely exhausted. Up to two years ago the accounts had been tolerably well kept, but since then they had been allowed to get into disorder. A composition offer unsecured was made of 5s. in 1*l.*, which by economy and energy Mr. Whitehouse thought he might be able to raise. It was ultimately resolved to wind-up in liquidation, and it was understood that the committee of inspection would make such arrangements with the debtor as they deemed advisable.

I regret to have to contradict the report which has this week obtained circulation that a seam of coal 6 in. thick had been struck at the Perry Hall Colliery. Although a depth 530 yards has been reached, no coal has yet been found, and the probabilities point to operations being suspended altogether.

The shareholders in the Hamstead estate voted a sum of money to help forward the sinking operations at Perry. The Hamstead Company have this week called up an additional 1*l.* a share.

Messrs. Hadley Brothers, of the Mitre Works, Birmingham, have been scarcely able to meet the demand for their patent machine nails, made from best Swedish charcoal iron, and which, though greatly cheaper, serve the purposes of wrought nails.

A monthly meeting of the Mines Drainage Commissioners was held yesterday, when a general surface rate of 1d. a ton was ordered for the half-year ending June 30, payable on Oct. 1. It was reported that the Commissioners had been successful in obtaining loans upon the security of the Tipton Mines Drainage rate, and the seal of the Commissioners was affixed to five such bonds, amounting in the aggregate to 2662*l.* Payments were made of 3023*l.* on account of general drainage, and of 2109*l.* on account of mines' drainage.

The improvement recently noted with respect to a few conspicuous works in North Staffordshire appears to be extending to the more general class of makers.

"Manufacturer" writes—"As we hear so much about prices of iron and wages in these days of competition, I have thought it may not be out of place to compare the situation with what was doing in the years 1868 and 1869. Merchant or crown sheet-iron and plates, both common and best, were selling at 10s. to 15s. per ton better prices than to-day. Gas strip, too, was selling at about 12s. 6d. per ton higher than now, but the most striking difference is apparent in the price of nail sheets, for whilst our books show that 7*l.* 10s. per ton was the average selling price in 1868 and 1869, this article, I am credibly informed (for I have long ago ceased to compete in it), is selling at 6*l.* per ton, or a difference of 30s. per ton against the seller! Tap cinder was selling at 4s. per ton during 1868 and 1869, and it is to-day realising 6d. to 9d. per ton! Forge coal was about 1s. per ton cheaper, whilst the best classes of pigs, native all-mine and hematite, were procurable at 5s. to 7s. 6d. per ton less than prices now ruling, and I may observe that the latter was then selling at long weight, or 2400 lbs. per ton, thus accounting for the difference. As regards wages in 1868 and 1869, we were paying 7s. 6d. per ton for puddling; we are now paying 8s. per ton, and millmen and others 5 per cent. extra. The fact must also not be lost sight of that a numerous class of operatives is now at work at the revised or short hours. Would it not be well for the pioneers of reckless underselling (notably some of the new firms and a few of the limited liability companies) to pause, and ask themselves the question how long this disastrous state of things is to go on? I can assert that the years 1868 and 1869 only yielded small profits."

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE MINING ENGINEERS.—On Monday the monthly meeting of the members of this Institute was held at the Geological Museum, Dudley, Mr. Henry Johnson, sen., presiding, in the unavoidable absence of the president (Mr. W. North, Mayor of Dudley). After some formal business was explained by the secretary (Mr. Alex. Smith, C.E.), there were long and scientific discussions on papers by Mr. Joseph Williams (lecturer to the Institute), "On Spontaneous Combustion," "On Spirorbis Limestone," a paper read by Messrs. Daniel Jones, F.G.S., and Mr. H. Johnson, and on a paper by Mr. W. Wardle, entitled "Ventilation—Causes of Spontaneous Combustion and Falls of Roofs." Votes of thanks were given to the readers and writers, and acknowledged.—[A detailed report of the proceedings will appear in next week's Journal.]

GAS STOVES AND COOKING RANGES.—The judges of the gas stoves and cooking ranges exhibited at the Industrial Exhibition now being held at Wolverhampton have made their awards. The prize for the best cooking apparatus for an artisan's family of from four to eight persons has been awarded to Messrs. J. Billing and Co., of Bloomsbury, London. In another class for gas stoves to suit the requirements of a family wishing a daily dinner, also sufficient hot water for cleaning purposes and for tea, the award fell to Messrs. J. Wright and Co., of Broad-street, Birmingham. Messrs. Scott, Brown, and Co., of West Bromwich, took the prize for cooking apparatus to suit the requirements of a middle-class family of from six to eight persons. Messrs. Hassall and Singleton, of Birmingham, carried off

the prize medal for a complete family kitchener for the use of a family of from 10 to 16 persons. They also secured the prize with a gas-stove for use as an accessory in kitchens of large houses, the judges making a very strong recommendation of the superiority of this stove. Mr. B. P. Walker, Broad-street, Birmingham, secured the prize for coal ranges, Mr. J. E. Priest, also of Birmingham, was the successful competitor in cheap workmens stoves, and the medal for the most cheerful and effective gas fire was awarded to Messrs. D. Clare and Co., Handsworth, Birmingham. The competitors were numerous, and the merits of many of the exhibits obtained honourable mention.

TRADE OF THE TYNE AND WEAR.

Aug. 7.—The Coal Trade varies little, and there has been no improvement of late in the demand for any kind of coal or coke. The business done at Tyne Dock and at Sunderland Docks is, no doubt, an average, but it is clear that either the output must be further reduced or an increased demand must spring up in order to put the trade into a healthy position. Steam and small coals are sold at a low rate at Amble, the northern extremity of the field here, and it is proposed to reduce the wages of the miners still further at this point. House coal is in little demand, and offered at various prices ranging from 6s. 6d. to 9s. 6d. per ton. In Durham small coal is not so abundant. Best gas coal remains at 7s. to 7s. 6d. per ton. The returns of the Cleveland Ironmasters' Association show that there was a make of 139,015 tons, being an increase upon the month of June amounting to 3686 tons. Of hematite and speigeleisen there was a make of 29,816 tons, an increase of 826 tons upon June, giving a total make of all kinds of 168,831 tons. There are 94 furnaces in blast. The shipments were large, being foreign and coastwise 78,642 tons. Makers' stocks were reduced by 18,477 tons, and makers' stores by 5705 tons. There was an increase in warrant stores of 5468 tons, making the net decrease 18,714 tons. As might be expected from these results, the tone of the market on Tuesday was improved, and makers asked for higher rates, which, however, was not responded to, and about last week's quotations ruled—No. 3, 39s.; No. 4 pig, 38s. to 39s. There is a marked increase in enquiries for forward delivery to place on stock, and there is a considerable increase in speculation.

[The report of the Meeting of the North of England Institute of Mining and Mechanical Engineers will be found in page 867.]

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Aug. 8.—Since last notice but little change has taken place in lead mining in the Matlock, the Peak, and other districts, so that about an average tonnage of ore has been raised. In ironstone the tonnage raised is considerably below what it was some years since, but the Northamptonshire ore appears to satisfy the requirements of our ironmasters, and continues to be largely imported. It appears, however, that a discovery has been made of hematite iron stone, but of small extent, yet should further research lead to more being found it would make a great difference with respect to the ore brought from a distance, and to the making of pig that would be at once converted into Bessemer. That description of iron is extensively used and worked up Dronfield, but has to be brought from a distance. In fact the consumption of Bessemer steel is rapidly increasing, so that the finding of hematite ironstone in no part of the country would be more beneficial than in Derbyshire. The make of ordinary pig-iron has kept up very well, and has gone off rather better of late, but prices as yet have not improved, but there is a strong feeling that the worst has passed, and that an improved trade will follow hard on the establishment of the peace which has been secured. Some of the collieries have been doing a little more business, and finding increased employment for the workpeople, but short time is the rule. The London trade is much as it has been for several weeks past, and prices remain as they were. At some of the pits a fair quality of coal can be obtained at from 5s. to 6s. a ton, a price that leaves little or no profit, but colliery owners appear content if they manage to clear expenses. Steam coal has gone off better of late, but slack, smudge, and inferior coal generally are still dull. Complaints are still rife as to the want of water in several of the mining villages in North Derbyshire, although there must be plenty that only wants tapping.

Messrs. Mitchell and Peacock, engineers of Barnsley, have been successful in launching an inexpensive scheme for supplying the mining villages in South Yorkshire with plenty of good water from the rocks connected with the coal measures, and there does not appear to be any reason why the same sources could not be made available in North Derbyshire, where the rocks are similar.

It was thought a few months ago that iron armour-plates had been banished forever from the British Navy, and that for the future we were to have our ships sheathed with a steel face of great tenacity fixed upon a backing of iron. But those who thought so have been mistaken, for the two great makers in Sheffield are now busily engaged in rolling some 15 or 16 in. thick for the Admiralty. But the fact, no doubt, is that the steel plates tested have not in any way come up to the desired mark. The best are the plates produced by Sir J. Whitworth, studded with rivets, but these are said to be very expensive, which is probably the principal objection to them. But that steel plates will be the material used for our armour-clads is evident, and they will be produced at a moderate cost and with far greater resisting power than iron does not admit of a doubt. At the mills there has also been a fair output of ship and boiler plates, hoops, &c. Several of the cutlery houses are busier than they have been, whilst there has been an increase in the output of cast-steel.

The foundries have kept their men well going, good orders being in hand for ornamental stoves, pipes, fittings, and ordinary castings. At Elsecar work is now going on much as usual, the furnaces being in blast, and the mills working very well. In the town and district around Sheffield the Bessemer Works continue busy, and as the demand is on the increase some of the firms are preparing to lay down extra plant, so as to be in a position to largely exceed the present power of production. Russia is now taking a heavy tonnage of rails and machinery, and considerable quantities of the former have recently been sent to British India, and also to Germany. Iron rails do not go off at all well, so that production is declining, and this is only what might be expected, seeing that the difference in the price existing between them and steel is so trifling, whilst the life of the one is three times longer at the least than the other. At the collieries in South Yorkshire there has been but little change, though it certainly is more favourable than otherwise, and at a few of them the colliers are more fully employed; but prices do not improve, so that in some instances the more trade that is done the greater the loss to the owners. Steam coal is in better request, and the shipments from Grimsby have been well kept up.

It is expected that in the course of a few days a deputation from the colliery owners of South Yorkshire will wait on the directors of the Great Northern Railway Company to ask for a reduction of the rate by that line to London. Unless this is granted it may be expected that there will be a further decline in the tonnage sent over the Great Northern, which has been particularly heavy during the last three months. In the Barnsley district there is still a considerable number of miners on strike, and in receipt of the Association pay. An effort is being made to settle the dispute at Manvers Main, but there does not appear any likelihood of the strike at Dodworth, which has lasted for several months, being brought to a termination. The dispute at the Darton Hall and Gawber Hall Collieries, belonging to the Thorpe's Gawber Colliery Company (Limited), has, unfortunately, not yet come to a favourable issue. It will be remembered that a fortnight ago notices were given to the men to leave their employment because they refused to submit to a reduction, the owners at that time pointing out to them that they had lost over 1000*l.* in working the collieries during the half-year ending June 30, and that they could not continue to work them unless the men agreed to accept a reduction on their wages. During the past fortnight Mr. Outwin and Mr. Taylor, two of the directors, have met a deputation of the men, and afterwards attended a meeting of the men at their lodge, when they stated their reasons for demanding a reduction of 5 per cent. The men pointed out that if the masters were losing money they were also earning very little—in fact, some of them working at Darton Hall did not make more than 3s. 6d. a-day for three and a half or four days a week, whilst the average at North Gawber Hall was from 1*l.* to 1*l.* 4s. for a week. It was, however, decided that the men should continue working for three weeks longer, during which a meeting of the shareholders will be held and the matter discussed, when it is to be hoped that the men will meet the owners and an amicable arrangement be come to.

The report of Samuel Fox and Co. (Limited), whose works are at Stocksbridge, near Sheffield, shows a profit for the year of 24,379*l.*, and the directors recommend a dividend of 10 per cent. per annum.

REPORT FROM MONMOUTHSHIRE AND SOUTH WALES.

Aug. 8.—An event fraught with much importance to the town and port of Newport has just taken place. A graving dock, connected with the Alexandra Dock, was opened with much *eclat*, on Tuesday, by Lord Tredegar (chairman of the Alexandra Dock Company). The new dock is 500 ft. long and 50 ft. wide at the entrance. It is capable of receiving ships of the largest tonnage. The depth of water over the cills varies from 18 to 20 ft., and the newest appliances have been brought into requisition. The cost is estimated at about 26,000*l.* A German barque (the Fortuna) was the first vessel to enter. In the evening a grand banquet was given in honour of the promoters of the new Pontypridd Railway—Lord Tredegar, Sir George Elliot, M.P., Mr. J. R. McClean, and Mr. J. C. Parkinson, all directors of tha Alexandra Dock. Nearly 300 gentlemen were present. It may be the added Dock Company intend to open their new timber float in the course of a couple of months, which will have the effect of increasing the import trade of timber.

Mr. John Jebb, manager of Messrs. Coffin and Co.'s Dinas Collieries, has been charged at the Pontypridd Police-court with a violation of the Mines Regulation Act, for disregarding rules as to providing proper ventilation. The evidence of Mr. Galloway, Assistant-Inspector of Mines, was to the effect that there was a dangerous accumulation of gas in the colliery. A hauler was found to be working without a lamp, which he did not think it safe for him to have one. As soon as the witness saw the state of things he ordered all lamps to be put out, and those in the pit crawled out. With the exception of certain places, however, the ventilation was fair. The stipendiary said it was the worst case that had ever come before him, and he fined defendant 5*l.* and costs. Two other minor cases against a night fireman and under-overman were disposed of with fines of 20s. and costs, and 40s. and costs respectively.

The dividend of the Taff Vale Railway Company for the half-year is at the usual rate of 12 per cent. per annum—a dividend of 10 and a bonus of 2 per cent.

The Iron Trade remains in a comparatively unaltered condition. It is certain, however, that more business is still observable at some of the local works. Yet clearances during the past week have not been large, but include one to Trinidad. The demand for railway has shown a slight amount more activity, but prices are at a very low ebb, and it is becoming more and more manifest that steel are taking the place of iron rails. Both, however, still sell at very low prices, and these show no signs of an improvement. The bar iron department is also quiet. The steel trade is fairly active. As to the tin-plate industry a little more activity is observable. At Redbrook Works, near Monmouth, some decent continental orders have recently been received. There is also a talk about the Monmouth forges and tin-plate works being re-started. Prices, however, remain very low.

The Coal Trade during the week has also shown a little more activity, and it is satisfactory to state the Powell Duffryn Company have reopened the Upper Cwmpennar pit. Other collieries belonging to this company have also been put in working trim. Again, a new colliery has been opened at Llangennech by the Mwrwg Vale Coal Company. The demand, too, for steam coal is good, and there are several indications which point to an improvement. It is unfortunate, however, that prices do not rise. Shipments are very large. The demand for house coals is very quiet, but that for gas coal is a little brisker. The men at Llancaiah have resumed work on a day to day system.

PATELEY BRIDGE—GREAT DISCOVERY.—The ore body in the 30 fm. level east, on Rake vein, worth last week 8 tons of lead ore per fathom, is now valued at 10 tons per fathom; the end is in solid lead 4 ft. thick. During the week 14 tons of ore have been taken from the end. Every fathom driven on this rich lode substantially increases the ore reserves, the explorations in this direction being in unwrought ground up to surface—a depth of something like 90 fms. Should this grand discovery hold, as there is every indication it will hold, for some distance, Pateley Bridge will be the richest lead mine in the United Kingdom.

ROOKHOPE.—The manager reports a very considerable improvement in the mine—the best discovery he has ever seen there. It is in the adit level, where the lode is worth 2½ to 3 tons per fathom, the cost of stoping being only 28s. He also states that the workings generally in the back of the 42 have improved, and he sees no difficulty in dressing 15 to 20 tons per week—say, 60 to 80 tons per month.

VAN CONSOLS AND GLYN MINES AMALGAMATION.—The information we were enabled to give the public in the Journal of July 27 respecting the re-consolidation of these very promising mines, in order to work them economically as one concern, and to preserve the interests of the large proprietory in both who had paid so heavily for their shares, has been still further advanced by a late decision in the Rolls Court; so we hope we may soon congratulate the shareholders on the completion of this complicated, but most laudable, object, which has taxed the energies of their most able solicitor to accomplish.

The most elevated mine in the world is probably the Moose Mine in Colorado, which is situated nearly on the highest point of the South Park range. The miners' houses are being built into the mountain at the mouth of the mine, considerably over 14,000 ft. above the level of the sea.

SOUTH AMERICAN GOLD.—From the South Pacific Times of Peru we obtain the following item of news, which will be interesting here where some of the parties mentioned are well known:—Golden dreams are again beginning to disturb Chile, but this time there is no mysterious "reagent," or alchemical Cagliostro at the bottom of them. The great works in progress at Catapilco have effectually aroused people to a belief in the auiferous wealth of Chile, so long despised, and there is a digging and delving going on now all over the republic equal to the rummaging in laboratories of a year ago. Besides the Maigamarga company (belonging to Messrs. Henry and John Sewell) just formed we learn that another will soon be floated to work a locality called Malacara, in the department of Quillota, where operations have been carried on on a reduced scale for many years, and at considerable profit. Nuggets have been on view at the establishment of Mr. M'Gill, in the Calle del Cabo, which certainly would lead one to the belief that where they came from there would be an excellent opening for hydraulic mining, and we can only hope that the anticipations of the discoverers will be confirmed. Should Catapilco turn out a success there is no doubt a tremendous stimulus will be given to this branch of industry hitherto so much neglected, and the country can then afford to do without Paraff. Mr. Harry Holcombe has contracted to construct the canal, 18 miles in length, for the Margamarga company.—*Salt Lake Daily Herald*, July 19.

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FOUR MINES CERTAIN FOR A RISE.

IN THE MATTER OF THE COMPANIES ACTS, 1862 AND 1867,
AND IN THE
MATTER OF THE NORTHERN BOHEMIAN COLLIERIES COMPANY
(LIMITED).
THE CREDITORS of the ABOVE-NAMED COMPANY are required, on or before the 19th day of September, 1878, to SEND their NAMES and ADDRESSES and the PARTICULARS of their DEBTS or CLAIMS, and the names and addresses of their solicitors (if any) to JAMES FRASER, of No. 9, King's Arms-yard, Moorgate-street, in the City of London, the Official Liquidator of the said company; and, if so required by notice in writing from the said Official Liquidator, are by their solicitors to COME IN and PROVE their said DEBTS or CLAIMS at the Chambers of the Master of the Rolls, in the Rolls yard, Chancery lane, in the county of Middlesex, at such time as shall be specified in such notice, or in default thereof they will be EXCLUDED from the BENEFIT of any DISTRIBUTION made before such debts are proved.
Monday, the 28th day of October, 1878, at Twelve of the clock at noon, at the said Chambers, is appointed for hearing and adjudicating upon the debts and claims. JOHN WM. HAWKINS, Chief Clerk.
Dated this 2nd day of August, 1878.

LONG LEASE of CUMBERLAND LEAD MINE FOR SALE.
For full particulars, apply by letter to "L. M. 37," Messrs. Deacon's, 154, Leadenhall-street, E C.

A PUSHING AGENT IS OFFERED A VALUABLE COMMISSION.
"Machine Oil," at Horncastle's Central Advertisement Offices, 61, Cheapside, London.

TO BE SOLD, BY PRIVATE TREATY, A VALUABLE SLATE QUARRY, now producing Purple, Green, and Blue Slates, situate at NANTLLE VALE, CARNARVONSHIRE, in close proximity to a railway.
For particulars, apply to Messrs. J. and P. HIGSON, Mining Engineers, Booth-street, Manchester.

TO BE SOLD, SEVERAL VALUABLE GOLD MINES, in the neighbourhood of the ST. JOHN DEL REY MINES, BRAZIL.
The proprietors are prepared to allow two years' trial of the mines previous to purchasing.
Apply, "T. C. K.," MINING JOURNAL Office, 26, Fleet-street, E.C.

TO BE SOLD, FIVE 2½-inch INGERSOLL ROCK DRILLS, with PIPING, AIR COMPRESSOR, AIR RECEIVER, BOILER, and FITTINGS.
Address, "J. C. M.," MINING JOURNAL Office, 26, Fleet-street, London.

A UNITED STATES PATENT HAS BEEN GRANTED to MR. HENRY SEWELL, M.E., for the REDUCTION or ELIMINATION of SULPHUR from Native Sulphur Ores, without Fuel, Water, or Iron Retorts. These furnaces are made of common stone, costing $200 each, and having a capacity of 200 tons of ore, at one time. They last many years. Five of these furnaces can be handled by two men—one by day, and the other by night; that is, 1000 tons are worked at one time by two men.
Salt Lake City, Utah Territory, July 17, 1878.

MINING ENGINEER AND COLLIERY MANAGER.
A GENTLEMAN of 20 years' practice in the WINNING and WORKING of LARGE and IMPORTANT COLLIERIES, in various Coal Fields, is prepared to UNDERTAKE the MANAGEMENT of EXTENSIVE COLLIERY OPERATIONS. References can be given to Colliery Owners and to the highest Mining Authorities.
Address, "A. Z.," at C. H. May and Co.'s General Advertising Offices, No. 73, Gracechurch street, E.C.

AN IMPORTANT OPPORTUNITY.
THE ADVERTISER has a VALUABLE SILVER-LEAD SETT of great extent. Five lodes, on which a little north paid £500,000 in profits, WANTS a GENTLEMAN to ASSIST or RAISE a COMPANY, so as to thoroughly open and explore the same. A small amount will suffice, as silver-lead would be soon in the market.
Particulars from "Engineer," 26, Fleet-street, London, E.C.

Mr. E. JACKSON,
Associate of the Royal School of Mines,
ANALYST AND ASSAYER.
Assays or Complete Analyses made of Copper, Silver, Lead, Zinc, Tin, and other Ores. ASSAYING TAUGHT.
106, QUEEN VICTORIA STREET, LONDON, E.C.

C. H. WALKER AND CO.,
MINING AGENTS AND ENGINEERS,
VALPARAISO AND SAN IAGO,
CHILE.

HENRY SEWELL, M.E.,
318, PINE STREET, ROOM 34,
SAN FRANCISCO.
Cables will reach him by addressing—"Sewell, San Francisco."

Mr. OLIVER PEGLER, M.E.,
Associate of the Royal School of Mines,
12, RICHMOND GARDENS WEST, KENSINGTON PARK,
UXBRIDGE ROAD, W., LONDON.
Mineral Properties reported upon, New Mineral Fields explored, and Metallurgical investigations conducted, Mr. Pegler having travelled through India, Spain, Portugal, and other countries.
Highest commercial references.

INVESTMENTS IN CANADIAN PROPERTIES.
HERBERT C. JONES, M.A., BARRISTER AND ATTORNEY, SOLICITOR IN CHANCERY, 39, ADELAIDE STREET EAST, TORONTO, CANADA.
TO INVESTORS.
The general rate of interest on Mortgage Security, in which only one-third of the market value of improved firms is taken, is 6% to 8 per cent.
Investors furnished with the mortgage as well as if the property were in England. Interest paid regularly every half-year.
TO INVESTORS IN MINES.
The following properties dealt in:—
THE PIC COPPER COMPANY OF LAKE SUPERIOR.
THE GATLING GOLD AND SILVER COMPANY.
THE CRŒSUS SILVER MINE.
All business with Canada promptly attended to. Manitoba Lands secured.

DEVON AND CORNISH MINES.—It is worthy of notice that none of the mines recommended by R. J. R. have failed to yield satisfactory results; and investors will do well to write to the undersigned before investing, as he has a few shares in some very choice properties to dispose of.
R. J. RUTTER,
MINE BROKER,
5, PYNE'S TERRACE, ST. DAVID'S, EXETER.

MEXICO, NEW MEXICO, ARIZONA, UTAH, NEVADA AND CALIFORNIA.
F. M. F. CAZIN,
MINING AND CIVIL ENGINEER,
At BERNALLILLO, NEW MEXICO, U.S. OF AMERICA,
Has 24 years' experience in Mining and Smelting, and 10 years' experience in American Business and Law, offers his services at moderate charges for Reporting on Mining and other Property in any of the above-named States or Territories; gives correct, safe, and responsible advice as to securing full titles and possession; and, as to best mode of utilising the property, will assist in settling existing difficulties by compromise, and in disposing of developed mining property when held at real value; offers his assistance for securing undeveloped mining properties at home prices. As to care taken in reporting, reference is made to the *Mining Journal* Supplement, April 1, 1876, containing report on property of the Maxwell Land Grant and Railway Company; as to technical standing, to the prominent men of the trade—compare *Mining Journal* of Aug. 30 and Nov. 21, 1872, and *New York Engineer and Mining Journal*, Feb. 28, 1874.

LEAD MINING IN NORTH WALES.—The concession of an EXTENSIVE RANGE of LODES, traversing the Millstone Grit, and two recognised "flats" in the Mountain Limestone, has been secured by the undersigned, and upon favourable terms. Two or three parties WILL BE TREATED WITH for the PURCHASE of TWO-FIFTHS for £1000. The money to be expended in prospectusing and realising two points of great prospective value.
None but principals will be treated with, and mining experts preferred, as the merits and prospects will bear investigation and criticism.
Apply by letter, in the first instance, to—
R. TREDINNICK, Consulting Mining Engineer,
66, Coleman-street, London, E.C.

THE

WEST OF ENGLAND SPATHIC IRON AND LEAD SMELTING COMPANY

(LIMITED).

Incorporated under the Companies Acts, 1862 and 1867.

Capital £100,000, in 20,000 Shares of £5 each.

Payable—10s. on application, and 10s. on allotment; future calls, if required, at intervals of not less than two months.

Dividends will be payable on the amount paid up per share, or share warrant.

Shareholders will have the option of converting their share certificates into share warrants to bearer.

A discount of 5 per cent. will be allowed on all shares paid up in full on allotment.

DIRECTORS.

JOSEPH ALEXANDER, Esq., Sudbury, Suffolk.
EDWIN CARTER, Esq., 85, Gracechurch-street, London.
JOHN BURALL REYNOLDS, Esq., 70 and 71, Bishopsgate-street Within, London.
WILLIAM BENNETT RULE, Esq., Lee Terrace, Blackheath, Kent.

BANKERS.

Messrs. TWEEDY, WILLIAMS, and CO., Redruth, Cornwall.
SOLICITOR—JOHN G. CHILCOTT, Esq., Truro, Cornwall.

OFFICES—

ETHELBURGA HOUSE, 70 AND 71, BISHOPSGATE STREET WITHIN, LONDON.

PROSPECTUS.

The properties comprise four mines of iron and one of lead, the iron ore being of the very rare and valuable kind known as "Spathic." Of the iron ore Mr. Bessemer stated before a Committee of the House of Commons in 1865 "that it was the only steel ore known to the ancients, and the best known to us." The ore is shown by Dr. Noad's analysis to be superior to the celebrated steel ores of Siegen and Styria, having a larger percentage of the natural alloy of manganese and iron, and with less impurities. It produces "spiegeleisen" of great tensile strain, and is eminently adapted for the manufacture of steel. This peculiarity gives it special advantages over ordinary iron ore, and with the increasing demand for steel insures a ready market for it in its manufactured state.

It may be remarked that ores of this character are so rare in England that only two iron and steel making companies in Great Britain possess any, as may be seen by the accompanying evidence. The Ebbw Vale is one, and the celebrated Weardale the other; and the ores of this character which they raise do not, according to statistics of sales of iron ore in Great Britain, form more than 1-200th part of the iron ore raised in the United Kingdom.

The quantity of iron ore which the company's mines contain may be estimated from the following facts drawn from reports on the respective properties:—

Mine.	Levels driven.	Shafts sunk.	Results.
No. 1.—	½ mile, 80 yards deep	80 yards..	Two new lodes discovered, producing masses of spathose iron.
* No. 2.—	120 fms., 50 yards deep	25 fms. ... 10 fms. ... 10 fms. ...	A mass of ore laid open.
No. 3.—	100 fms., 40 fms. deep		Lode proved for 500 fms., 4 ft. to 9 ft. wide, with rich ore.
No. 4			Is of great extent; and has the rich Perran iron lode and the Cornwall Mineral Railway passing through it, by which the ore can be removed.
No. 5			Is rich in silver-lead ore, of which it has returned large quantities.

* For testimony that it is the best ore for making steel, and that it is specially adapted for making steel by the Bessemer process, see the evidence of Mr. Henry Bessemer and Mr. Edwin Carter before a Committee of the House of Commons relative to the Railway Bill, a copy of which accompanies this paper.

Over £12,000 has been already laid out in developing these mines, and the ground is laid open for further extensive operations. One of these mines—East Wheal Rose—returned the almost fabulous profit of £280,000 from the sale of silver lead only, on an outlay of £6400. This mine left off rich, the work being suddenly stopped by a great inrush of water, which drowned several miners, and, subsequently, through unforeseen difficulties. There is every reason to believe that it will again return similar profits to future proprietors on being drained and adequately worked, especially as this company possesses an extension of ground for nearly half a mile on the same rich lodes.

The smelting-works will be conducted at Newport, in Monmouthshire, and from the furnaces now proposed to be erected it is computed there will be produced 400 tons of iron per week, at a profit of £1 7s 8½d. per ton, which, after allowing for all expenses, would yield an income of £26,120, and this quantity can be increased to any extent the demand may warrant (yielding a proportionate profit), by erecting and working additional furnaces to meet such demand. For details and analysis of ores see enclosed statement.

An idea of the value of these properties may be formed from the fact that one of the proprietors of the above-mentioned mines sold a single mine in the neighbourhood for £40,000 cash, and £3000 per annum for 50 years.

The magnitude of similar undertakings, and the profits they return may be seen from the fact that Messrs. Bolckow, Vaughan, and Co., of Middlesboro', commenced in 1848 to erect their first furnace, with a capital of £4000, and their property sold in 1864 for £1,250,000—their annual profits having for many years been £400,000 per annum. The average profit divided by the Barrow Hematite Steel Company for the last eleven years has been £156,401 per annum. This company produces double length steel rails at the rate of about one per minute.

By an agreement with Mr. Carter, who will have the direction and control of the smelting works, the vendors have secured the exclusive right to his "Special Process" for reducing the Iron Ores.

The process is based on the first principles of chemistry, and effects an enormous saving in the quantity of fuel used. By a mixture of the different ores and fluxes in certain proportions a perfect amalgamation of the various earths is effected—a point which has been long aimed at, but not as yet attained, by the great ironmasters of the kingdom. Mr. Carter states, and the directors believe, that by this process iron can be made in three hours which under ordinary circumstances would occupy thirty-six hours.

The company will possess the following great advantages:—

1.—The "spathic" being the best adapted of any ore for the manufacture of steel, will meet the rapidly growing demand for "steel," to supersede "iron" for railway and other uses.

2.—The company will possess unusual facilities for the transit of ore from the mines to the smelting-works, thereby effecting great economy of operation. A railway passes through one of the mines to the coast.

3.—Should circumstances require it, the company will be able to carry on a profitable business by extending their operations to the smelting of other suitable ores than those raised from their own mines.

4.—The proposed mode of procedure will, it is confidently expected, be the means of forming the nucleus of a very extensive and eminently profitable commercial undertaking.

5.—The present time is most opportune for introducing such an undertaking. The large demand for steel rails as a substitute for iron, and their application to tram and railways, opens the way for large contracts under that head: the well-known Krupp guns are manufactured from this kind of metal.

6.—The present value of the metal spiegeleisen produced from the iron ores of these properties, is now nearly double that of ordinary iron.

7.—Mr. Carter's economical and rapid process of smelting.

It cannot be too strongly urged that this enterprise will not be affected by the present depressed condition of the iron trade. That depression is caused, partly by the diminution of demand for ordinary iron, from the general dulness of trade, but chiefly from the largely extending use of steel for rails, ships, bridges, and numerous other works, and for the manufacture of which ordinary iron is unsuitable, but for which the iron made by this company is specially adapted. Mr. I. Lowthian Bell has often expressed an opinion that the age of iron is approaching its end, and that steel will eventually take its place.

The primary object of the company is to carry out the smelting of spathic iron ore, which it is believed will return large profits in a comparatively short time; as soon as this object is attained attention will be given to lead smelting.

The capital of the company is £100,000, in 20,000 shares of £5 each. The liability of the shareholders is limited to the amount unpaid on their shares. The amount agreed to be taken by the vendors for the entire properties, consisting of five mines, the setts of which altogether amount to nearly 2000 acres, also for the perpetual and exclusive right to Mr. Carter's special process, is £40,000, of which £10,000 is to be in cash and £30,000 in paid-up shares. The only contracts are as follows:—One dated the 11th day of April, 1878, between Joseph Alexander and John Burall Reynolds, of the first part; Edwin Carter, of the second part; Edwin Carter and Emma his wife, Joseph James Reynolds, the said John Burall Reynolds, John Henry Chambers, and Nigel Winthrop Yonge, of the third part; and George Still as trustee for the company; and another dated the 14th day of May, 1878, between Edwin Carter, of the first part, and the said George Still, of the second part, on behalf of the company.

Reports, giving full description of the properties herein mentioned and their value, may be seen, and forms of application for shares may be had at the company's offices.

GLASGOW AND THE HIGHLANDS.

ROYAL ROUTE VIA CRINAN AND CALEDONIAN CANALS by the new steamer "COLUMBA," or the "IONA," from GLASGOW DAILY at 7 A.M., and from GREENOCK at 9 A.M., conveying passengers for NORTH and WEST HIGHLANDS. See bill, with map and tourist fares, free, at Messrs CHATTO and WINDUS, Publishers, 74, Piccadilly, London; or by post from DAVID HUTCHESON and Co., 119, Hope-street, Glasgow.

MR. W. F. STANLEY, MATHEMATICAL INSTRUMENT MANUFACTURER TO H.M.'S GOVERNMENT, COUNCIL OF INDIA SCIENCE AND ART DEPARTMENT, ADMIRALTY, &c.
MATHEMATICAL, DRAWING, and SURVEYING INSTRUMENTS of every description, of the highest quality and finish, at the most moderate prices.
Price-list post free.
ENGINE DIVIDER TO THE TRADE.
ADDRESS—GREAT TURNSTILE, HOLBORN, LONDON, W.C

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACTS, 1862 and 1867, and of the CHARLOTTE UNITED MINES (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, on Monday, the 19th day of August instant, at Eleven o'clock in the forenoon, at the Charlotte United Mines, in the parish of St. Agnes, within the said Stannaries, in one or more Lots, and subject to such conditions as shall be then and there stated and produced, the WHOLE of the

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS

belonging to the said company, and being within and upon the said mines, and comprising—

ONE 36 in. cylinder PUMPING ENGINE, with ONE BOILER, about 10 tons, steam pipes, and all complete.

Two balance bobs, with boxes and balance rod connections; 1 50 ft. shears, with stays and shieves; 2 1 horse whims, with shaft tackle, shieves, stays, &c.; 50 fms. of wire rope, 50 fms. of chain; 80 fms. of 2 in. flat rods, pins and connections; double power crab winch; 40 fms. iron stave ladders; 40 fms. of launders from engine shaft.

ONE 22 in. WINDING and STAMPING ENGINE, 3 ft. 9 in. stroke; 2 fly wheels, 11 ft. diameter; axle for 16 heads, cams, lifters, with 8 ton BOILER complete.

Capstan stand and stays, hand jack screw and 1 3 in. drop screw, carpenters' bench and chest, grinding stone and frame, taps and plates, anvil, vice and bench, iron blocks, bell and stand, 36 in. smiths' bellows, smiths' crane and chest, a quantity of new and old iron, timber and brick, wood houses and sheds, smiths' and miners' tools, bolts and burrs, kibbles, wheelbarrows, and other articles and effects in general use in mines.

For full particulars of which apply to the Official Liquidator of the said company, at the Stannaries Court Office, Truro; and for inspection of the said machinery, &c, to the Bailiff in charge at the mines.

HODGE, HOCKIN, AND MARRACK, Truro.
(Solicitors for the Official Liquidator).

Dated Stannaries Court Office, Truro, August 7th, 1878.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN the MATTER of the COMPANIES ACT, 1862, and of the WHEAL SPARNON MINING COMPANY.—Notice is hereby given, that a PETITION for the WINDING-UP of the above-named company by the Court was, on the 6th day of August instant, presented to the Vice-Warden of the Stannaries, by William Harvey, Henry Whitford, William West, William John Rawlings, William Husband, Francis Harvey, and Nicholas James West (carrying on business at Hayle, within the said Stannaries, as General Merchants, under the style or firm of "Harvey and Company," shareholders, and claiming to be also creditors of the said company, and that the said petition is directed to be heard before the Vice-Warden, at the Prince's Hall, in Truro, in the county of Cornwall, on Saturday, the 17th day of August instant, at Ten o'clock in the forenoon.

Any contributory or creditor of the company may appear at the hearing and oppose the same, provided he has given at least two clear days' notice to the petitioners, or their solicitors, of his intention to do so, such notice to be forthwith forwarded to P. P. SMITH, Esq., Secretary of the Vice-Warden, Truro.

Every such contributory or creditor is entitled to a copy of the petition and affidavit verifying the same from the petitioners, or their solicitors, within 24 hours after requiring the same, on payment of the regulated charge per folio.

Affidavits intended to be used at the hearing, in opposition to the petition, must be filed at the Registrar's Office, Truro, on or before the 15th day of August inst.; and notice thereof must at the same time be given to the petitioners or their solicitors. HODGE, HOCKIN, AND MARRACK, Truro, Cornwall

Dated Truro, August 8th, 1878. (Solicitors for the Petitioners).

VALUABLE MINE NEAR ST. COLUMB FOR SALE.

IN THE MATTER OF THE PENHALE AND BARTON MINING COMPANY (LIMITED).

MR. HOWARD has been favoured with instructions from the Liquidators of the above company to OFFER FOR SALE, BY AUCTION, on the Mine, on Wednesday, the 14th day of August, 1878, at Two o'clock in the afternoon, in One Lot, as a going concern (subject to such conditions as will be then and there produced), all that valuable property called the

PENHALE AND BARTON TIN AND COPPER MINES,

Including the LEASES and SETTS thereof, together with the WHOLE of the MACHINERY, PITWORK, MATERIALS, AND EFFECTS

Thereon, comprising—

ONE 32 in. cylinder PUMPING ENGINE, ONE 10 ton BOILER, 10 fms. 16 in. lift, 10 fms. 14 in. ditto, 25 fms. 14 in. pole, 5 13 in. pumps, 2 balance bobs, 8 arm capstan, pair shears 60 ft., with pulleys, steel wire ropes, 11 stamp heads, with driving wheels and connections, 6 Borlase's patent buddles, 4 circular centre head ditto, 2 single impellar buddles, 1 double ditto, 2 water wheels, 2 horse whims and stands, about 80 fms. ladders, 30 fms. railway iron, tram wagon, wood tin house 60 by 24 ft., with sieves, chests, and necessary appliances, launders from reservoir to water wheel and stamps, 100 fms. 4 in. iron pipe, from Higher Pool to engine house, carpenters' shop, powder house, scales and weights, set of smiths' tools, screwing gear, large quantity of steel and iron, and numerous requisites for carrying on the work of the mine.

The mine is situate 4 miles from St. Columb, a like distance from Grampound Road Station, and 1½ mile from the Halloon Station of the Cornwall Minerals Railway.

For further particulars, apply to the Auctioneer, St. Columb; G. B. COLLINS, Esq., Solicitor, St. Columb; or of Messrs. BRANSON and SONS, Solicitors, Bank Buildings, Bank-street, Sheffield.

Dated St. Columb, 23rd July, 1878.

TO BE SOLD, BY PUBLIC AUCTION, under Decree of the Supreme Court of Newfoundland in Equity, in a suit between CHARLES FOX BENNETT, Plaintiff, and SMITH MCKAY and LEANDER GILL, Defendants, on Monday, the 2nd day of September next, at Twelve o'clock noon (if not previously disposed of by private sale), at the Court House, in St. John's, Newfoundland, that VALUABLE COPPER MINE and MINING PROPERTY called and known as the

UNION MINE,

Situate on the east and west sides of Tilt Cove, on the north side of Notre Dame Bay or Green Bay, Newfoundland, and near Cape John, with all ERECTIONS, IMPROVEMENTS, PLANT, and OTHER PROPERTY and EFFECTS thereto appertaining.

The mine is held under grant in fee from the Government of Newfoundland, containing two miles in length, by half a mile in breadth; a Licence of Occupation from the said Government, containing one mile square, west of and adjoining the Crown grant and land held under conveyance of fee-simple interests of former owners.

The title-deeds and documents, and plans and surveys of the property may be seen, and further information may be obtained, by application to PRESCOTT EMERSON, Esq., Q.C., Master-in-Chancery, at his office, in St. John's; or to either of the undersigned solicitors for the parties, or to either of the parties.

Conditions of sale will be published hereafter.

PRESCOTT EMERSON, Q.C., Master-in-Chancery,
St. John's, Newfoundland, January 23rd, 1878.

For further particulars, apply to C. T. BENNETT, Esq., No. 55, Queen's-square, Bristol; Messrs. HENRY BATH AND SON, Gresham House, London; or to PINSENT AND GREENE, Solicitors to the Plaintiff; WINTER AND CARTER, Solicitors for Defendant McKay.

CARMARTHENSHIRE, SOUTH WALES.

FOR SALE, BY PRIVATE CONTRACT, A VALUABLE FREEHOLD ESTATE, in the parish of LLANDISSILIO, comprising the FARMS of GILFACH, GLANDY FAWR, and GLANDY FACH, containing together upwards of SIX HUNDRED AND THIRTY ACRES of LAND, in a ring fence, with the far-famed Gilfach or Whitland Abbey Green Slate Quarries, and very extensive veins of green and blue slate and slabs.

The quarries have lately been inspected by an eminent mineral surveyor, and copies of his report, with all further particulars, may be obtained on application to Messrs. J. and E. EATON EVANS, Solicitors, Haverfordwest.

TO INVESTORS.

FOR SALE, A FIRST-CLASS SLATE QUARRY.

FOR SALE, the WHOLE or a PORTION of a FIRST-CLASS SLATE QUARRY, in DEVONSHIRE (area about 13 acres). The slate pronounced by competent judges to be equal to Delabole. Steam machinery, with all appliances and plant for working the quarry, are on the ground.

This quarry has been surveyed, drawings prepared, and most favourably reported upon by one of the first engineers of London connected with the Welsh quarries. The whole affords a splendid opportunity to investors having capital at their disposal, and the strictest investigation permitted.

Apply to F. R. STANBURY, Solicitor, 13, Princess-square, Plymouth.

SANTANDER ZINC MINING COMPANY

(LIMITED).

THE SANTANDER ZINC MINING COMPANY (LIMITED) OFFER their VALUABLE LEAD MINES in the NORTH OF SPAIN FOR SALE. A large amount of capital has been expended on machinery and in opening up the mines. The present prospects are promising to anyone commanding a moderate capital, which is required for completion of same.

For further particulars, apply to The Secretary, 35, Corn street, Bristol.

TO BE LET, the MINES lately worked by the GENERAL MINING COMPANY, at SILVERMINES and GURTNADYNE, in the parish of Kilmore, barony of Upper Ormond, and county of Tipperary; and also the ROYALTIES of all the TOWNLANDS, the property of Lord Dunalley, on which the said mines are situate, and which lie between the river at Silvermines, on the east, and the bounds of the townland of Gurtnadyne, on the west, and between the Silvermines and Shahee Road on the north, and the summit of the mountain on the south, which is the boundary of the said townlands on that side; and also the ROYALTIES of the part of the townland of Garryard, which are held by Lord Dunalley, by assignment from the lessee of W. Gleese, of Garryard, for 16 years of an unexpired term of 30 years; and also the ROYALTIES of West Shahee, held in fee by Lord Dunalley according to the bounds delineated in the deeds thereto relating; and all the buildings and other works, including THREE ENGINE HOUSES and STEAM ENGINES, and such portions of land as shall be included in the mining lease.

Copies of the proposed lease, which has been prepared, will be forwarded to any person applying on application to Lord DUNALLEY, Kilboy, Nenagh, the letter of application to contain an Order for £1 as payment for the said copy of lease.

[This advertisement will be repeated once a month for three months.]

18 H.P. PORTABLE STEAM ENGINE, with link motion, reversing gear, ready for delivery; also gear to wind and pump.
A 9 h.p. VERTICAL STEAM ENGINE, with link motion, reversing gear (winding drum if required).
A 6-ft. PAN MORTAR MILL, VERTICAL ENGINE, and BOILER, with carriage and travelling wheels.
Apply to—
BARROWS AND STEWART, ENGINEERS, BANB

WINDING ENGINES, NEW PRINCIPLE, best and most compact in the market. Several pairs ready.
PORTABLE WINDING AND SINKING ENGINES, the cheapest and most convenient and durable.
STEAM CAPSTANS AND HAULING ENGINES. The greatest power in the space of any made.
HORIZONTAL, VERTICAL, AND PORTABLE ENGINES. First-class make and low price.
PUNCHING, SHEARING, DRILLING, AND OTHER MACHINES.
Many of the above secondhand, very cheap.
ALEXANDER SMITH, ENGINEER, THE MIDLAND MACHINERY STORES.—Offices: PRIOR STREET, DUDLEY.

THE TAVISTOCK IRONWORKS, ENGINEWORKS FOUNDRY, AND HAMMER MILLS,
TAVISTOCK, DEVON.
NICHOLLS MATHEWS, AND CO.
ENGINEERS, BRASS AND IRON FOUNDERS,
BOILER MAKERS AND SMITHS.
MAKERS OF
CORNISH PUMPING, WINDING, AND STAMPING ENGINES; STEAM CAPSTANS AND CRUSHERS; WATER-WHEELS; PUMP-WORK; SHOVELS, AND HAMMERED IRON FORGINGS OF EVERY DESCRIPTION.
Also of SPUR, MORTICE, MITRE, BEVIL, and other WHEELS, of any diameter up to 12 feet, made by Scott's Patent Moulding Machine, without the aid of patterns, and with an accuracy unattainable by any other means.
MACHINERY or FOREIGN MINES carefully prepared.
SECONDHAND MINING MACHINERY, in good conditon, always on sale, at moderate prices.

THE BIRMINGHAM WAGON COMPANY
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MANUFACTURE RAILWAY CARRIAGES and WAGONS of EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract. MANUFACTURERS also of IRONWORK, WHEELS, and AXLES. EDMUND FOWLER, Managing Director.
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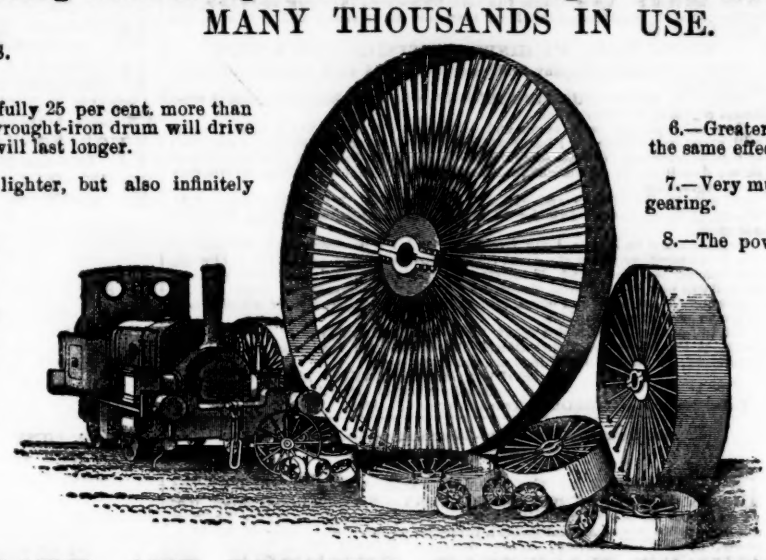

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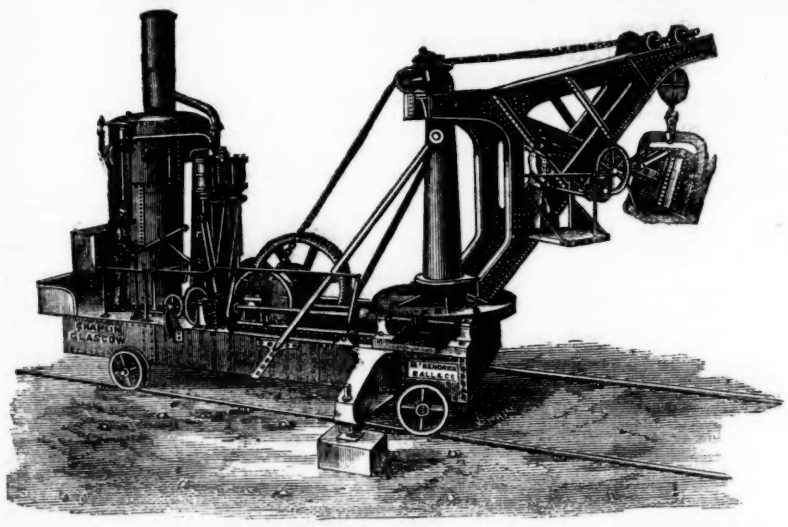

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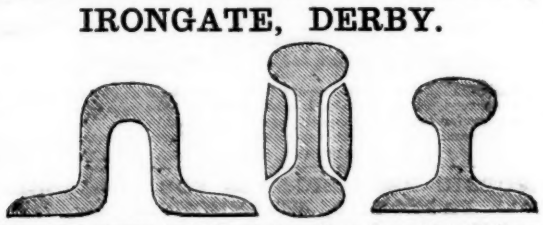

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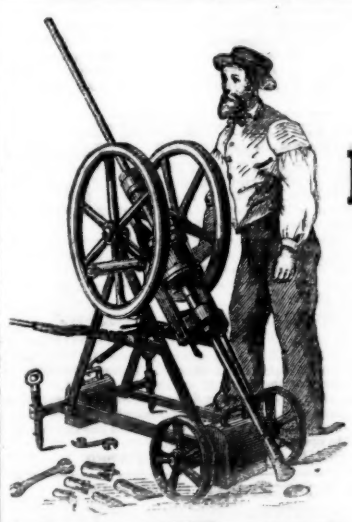

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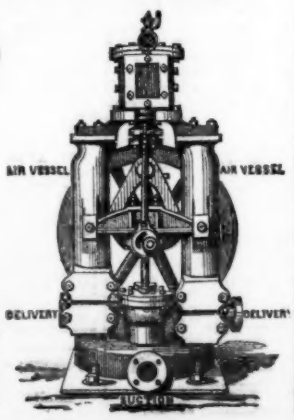

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2000	Bryn Alyn,* l, Denbigh	10 0 0	—		0 7 0	0 7 0	Jan. 1877
10000	Caron, l, Cardigan*	2 0 0	2⅛	2¼ 2¾	0 2 0	0 2 0	July 1878
1000	Carn Brea, c, t, Illogan†§	36 7 6	36	32½ 35	308 0 0	1 0 0	Feb. 1874
400	Cashwell, l, Cumberland*	2 10 0	2¼	1¾ 2¼	1 9 6	0 2 0	Aug. 1876
2450	Cook's Kitchen, t, Illogan†§	24 14 9	¾	½ ¾	11 17 0	0 7 6	Jan. 1873
10240	Devon Gt. Consols, c, Tavistock†*	1 0 0	3	2 2½	116 15 0	0 5 0	July 1877
4296	Dolcoath, c, t, Camborne	10 14 10	27½	26 27	112 11 3	0 5 0	June 1878
5000	East Black Craig,* l., Scotland	5 0 0	—		0 10 0	0 10 0	Feb. 1877
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40000	Glasgow Cara., c* [30,000 £1 p., 10,000 15s. p.]		1⅜	1⅛ 1⅜	0 13 4	0 0 6	Feb. 1878
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15000	Great Laxey, l, Isle of Man*	4 0 0	19½	18½ 19½	23 19 0	0 8 0	July 1878
615	Gt. Retallack, l, bl, Perranzabuloe	5 18 6	—		0 1 6	0 1 6	May 1876
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30000	Grogwinion, l, Cardigan*	2 0 0	3	2 3	0 14 10	0 0 10	Aug. 1878
9830	Gunnislake (Clitters'), t, c	5 5 0	2⅜	2⅛ 2⅜	0 13 9	0 1 0	Oct. 1876
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2800	Isle of Man, l, Isle of Man*†	25 0 0	—		82 5 0	0 10 0	Feb. 1876
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14000	Llanidloes,* l, Montgomery	3 0 0	1¾	¾ 1¼	0 9 0	0 4 6	Nov. 1876
9000	Marke Valley, c, Linkinhorne	5 3 6	⅞	¾ ⅞	7 15 0	0 2 0	Jan. 1876
10000	Mellanear Copper, Hayle*	2 0 0	4	3½ 4	0 5 0	0 3 0	July 1878
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15000	Van, l, Llanidloes*	4 5 0	20½	17 19	23 0 6	0 5 0	July 1878
3000	W. Chiverton, l, Perranzabuloe†	12 10 0	9	7 8	55 10 0	0 10 0	Feb. 1878
1783	West Poldice, St. Day	10 0 0	—		1 19 0	0 4 0	July 1876
512	West Tolgus, c, Redruth	95 10 0	55	52½ 55	29 15 0	1 10 0	July 1878
2048	West Wheal Frances, t, Illogan	28 8 9	3¼	2½ 2¾	3 12 6	0 5 0	Oct. 1872
600	West Wheal Seton, c, Camborne†	47 0 0	12	8 10	446 0 0	0 15 0	Apr. 1878
12000	West WyeValley,* l, Montgom	3 0 0	2⅛	2¼ 2¾	0 12 0	0 3 0	Nov. 1877
1024	Wh. Eliza Consols t, St. Austell	18 0 0	—		18 0 0	1 0 0	Apr. 1878
2048	Wheal Jane, t, Kea	2 13 10	¾	½ ¾	8 5 0	0 5 0	July 1875
4295	Wheal Kitty, t, St. Agnes	5 4 6	2	1¾ 2	11 19 6	0 2 6	Dec. 1874
25000	Wh. Newton, a, c, s, t, Calstock*	1 0 0	—		0 8 6	0 4 0	Sept. 1877
80	Wheal Owles, t, St. Just§	161 5 0	35	30 35	522 10 0	4 0 0	Aug. 1872
3000	Wheal Peevor, t, Redruth	7 11 0	6½	6 6½	0 10 0	0 5 0	Aug. 1878
6000	Wheal Prussia, t, Redruth	0 5 0	6¾	5¾ 6¼ xd	0 4 0	0 1 0	July 1877
10000	Wye Valley, l, Montgomery*	3 0 0	2	1½ 2	0 10 6	0 4 6	Oct. 1876

FOREIGN DIVIDEND MINES.

Shares	Mines.	Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500	Alamillos, l, Spain*†	2 0 0	1¼	1¼ 1¾	1 19 3	0 1 0	April 1878
30000	Almada and Tirito Consol., s*†	1 0 0	½	¼ ½	0 6 3	0 1 0	May 1876
20000	Australian, c, South Australia†	7 7 6	1⅜	1¼ 1½	0 19 6	0 1 6	July 1877
10000	Battle Mountain,* c, (6240 part pd.)	5 0 0	—		0 10 0	0 10 0	Nov. 1872
15000	Birdseye Creek, g, California*	4 0 0	⅞	⅝ ⅞	0 14 0	0 2 6	June 1874
20000	Cape Copper Mining,*† So. Africa	7 0 0	32	31 32	31 7 6	0 17 6	June 1878
34433	Cedar Creek, g, California*	5 0 0	⅜	⅛ ⅜	0 5 0	0 2 6	June 1872
35000	Cesena Sul. Co., Romagna, Italy*	10 0 0	—		0 10 6	0 3 0	Aug. 1877
15000	Chicago, s, Utah*	10 0 0	1	½ 1	2 8 0	0 4 0	Nov. 1876
65000	Colorado United, s-l, Colorado*†	5 0 0	4¼	4¼ 4¾	0 13 6	0 4 0	Jan. 1878
10000	Copiapo, c, Chili* (£20 shares)	16 15 0	—		7 11 5	0 3 0	May 1877
100000	Don Pedro North del Rey*†	0 16 0	⅝	½ ⅝	2 5 9	0 2 0	Mar. 1875
23500	Eberhardt & Aurora, s, Nevada*†	10 0 0	7	6 6½	1 8 0	0 3 0	Dec. 1877
70000	English & Australian, c† S. Aust.	2 10 0	1⅝	1¼ 1½	2 15 9	0 1 0	Mar. 1877
30000	Flagstaff, s, Utah*	10 0 0	⅝	⅜ ⅝	4 2 0	0 5 0	July 1873
25000	Fortuna, l, Spain*†	2 0 0	5¼	4¾ 5¼	6 19 10	0 5 0	April 1878
55000	Frontino & Bolivia, g, New Gran.*†	2 0 0	2⅜	1¾ 2	0 1 0	0 1 0	June 1876
30000	Gold Run, hyd.	1 0 0	—		0 2 4	0 0 4	Oct. 1875
68000	Kapunda Mining Co. Australia†	1 3 0	—		0 2 4	0 0 6	June 1875
20000	Last Chance, s,* Utah	5 0 0	1¾	⅞ 1⅛	0 14 0	0 2 0	July 1875
15000	Linares, l, Spain*†	3 0 0	5½	4¾ 5¼	17 7 10	0 5 0	April 1878
65000	London and California, g*†	2 0 0	⅝	¼ ½	0 1 0	0 1 0	July 1875
7837	Lusitanian, Portugal*† (£5 sh.)	3 10 0	—		1 11 6	0 1 6	Mar. 1873
5000	Mamm. Copperopolis of Utah, c, s	10 0 0	—		0 5 0	0 5 0	Dec. 1872
5000	Mountain Chief, s, Utah*	10 0 0	—		0 4 0	0 4 0	Jan. 1873
10000	Pontgibaud, s-l, France†	20 0 0	30	28 30	25 19 11	0 11 11	June 1878
100000	Port Phillip, g, Clunes*†	1 0 0	⅝	½ ⅝	1 10 0	0 1 0	Jan. 1878
54000	Richmond Consols, s, Nevada*†	5 0 0	10¾	9 9½	6 1 6	0 10 0	Aug. 1878
40000	Santa Barbara,* g, Brazil	0 10 0	1⅛	1 1¼	0 4 9	0 1 0	April 1878
120000	Scottish Australian Mining Co.*†	1 0 0	2	1¾ 2	15 per cent.		May 1878
80000	Scottish Austral. Mining Co., New	0 10 0	⅞	¾ ⅞	15 per cent.		May 1878
12500	Sierra Buttes, g, California*†	2 0 0	2	1¾ 2	1 18 0	0 2 0	Oct. 1877
60000	South Aurora, s, Nevada*	5 0 0	¾	½ ¾	0 14 2	0 2 0	Nov. 1875
£253000	St. John del Rey*† (£5 stock & multiples dealt in)			275 285	½ year 17½ p. ct. for June		1878
20000	Tolima, g, s* So. America	5 0 0	—		0 11 6	0 6 6	May 1874
25000	Victoria (London)*, g, Australia	1 0 0	¾	⅝ ¾	0 12 6	0 0 7½	Jan. 1878
15000	Western Andes, s,* New Granada	5 0 0	—		0 12 0	0 12 0	July 1876
21000	W. Prussian (5500 pref. sh. 10l. pd)	10 0 0	11	10½ 11	1 2 0	0 4 0	July 1878

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Paid.	Last Pr.	Clos. Pr.	Last Call.
5000	Anguilla Phosphate, West Indies (4000 issued)	10 0 0	—		Fully pd.
12000	Argentine, g, Argentine Republic	5 0 0	¾	¼ ¾	Fully pd
3000	Bellavista, s, Peru* (£10 shares)	10 0 0	—		Fully pd.
30000	Blue Tent, hyd., California	5 0 0	3	2¾ 3	Fully pd.
49935	Chontales, g, s, Nicaragua*†	2 0 0	⅝	½ ⅝	Fully pd.
16000	Condes of Chili, s-l	5 0 0	—		Fully pd.
20000	English Australian, g, Victoria*	1 0 0	⅞	⅝ ⅞	Fully pd.
35000	Excelsior Hydraulic Gold Washing Co., California*	6 0 0	—		Dec. 1871
100000	Exchequer, g, s, California*†	1 0 0	2s.	1s. 2s.	Fully pd.
40000	Holcombe Valley, g,* California	1 0 0	—		Fully pd
8000	Hornachos,* s-l, Spain	10 0 0	—		Fully pd.
12000	Hultafall,* l, bl, Orebro, Sweden	5 0 0	5	4 5	Fully pd
12000	Hunter Consolidated, s-l, Utah	10 0 0	—		Fully pd.
20000	Imperial Brazilian Collieries, Brazil*	5 0 0	—		Fully pd.
100000	I. X. L., g, s, California*	1 0 0	—		Fully pd.
50000	Javali, g, Nicaragua*	2 0 0	9s.	7s. 9s.	Fully pd.
3500	La Manche, l, Newfoundland	10 0 0	—		Fully pd.
12000	Lanestosa,* l, z, Viscaya, Spain (£2 shares)	1 15 0	—		Mar. 1876
75000	Malabar, g, Colombia* (67165 issued)	1 0 0	¼	⅛ ¼	Fully pd.
40000	Malpaso, g, Colombia* (7400 pref. shares, fully paid)	1 0 0	⅜	¼ ⅜	Fully pd.
12000	Menzenberg, c, Honnef, Germany*	5 5 0	—		Fully pd.
4588	New Bensberg, i, l, Germany	5 0 0	—		Nov. 1876
66000	New Quebrada, c, Venezuela*	5 0 0	2⅛	1¾ 2	Fully pd.
20000	New Zealand Kapanga, g, Coromandel*	5 0 0	1	¾ 1	Fully pd.
3000	Oregon,* g, Oregon, U.S. (preference shares)	4 0 0	—		Fully pd
50000	Panulcillo, c, Chili*† (£80000 debentures)	4 0 0	¾	⅝ ¾	Fully pd.
30000	Pestarena United, g, Italy*†	3 0 0	6s.	4s. 6s.	Fully pd.
25000	Pitanqui,* g, Brazil (incl. 6000 sh. £1 fully paid)	0 5 0	¼	⅛ ¼	Aug. 1878
25000	Placerville,* g q, California	2 0 0	2⅜	2⅜ 2⅝	Fully pd.
50000	Providencia and New Rosario, s, Mexico*‡	1 0 0	—		Fully pd.
50000	Rica, g, Colombia* (40000 issued)	1 0 0	¼	⅛ ¼	Fully pd.
£2,181,000	Rio Tinto,* c, Huelva, Spain	Stock	65	63 65	Fully pd.
100000	Rossa Grande, g, Brazil*† (£1 shares)	0 19 0	⅛	⅛	July 1872
30040	Russia Copper, Orenburg and Ufa*†	10 0 0	—		Fully pd
25000	San Pedro, c, Chili*	2 0 0	⅜	¼ ⅜	Fully pd.
10000	Silver Plume, s, Colorado*	1 0 0	—		Fully pd.
30000	Tecoma, s, Utah*	10 0 0	⅜	⅜ ⅝	Fully pd.
43174	United Mexican, s, Mexico*†‡	29 0 3	4	3½ 4	May 1878
14000	Utah, g, s-l, Utah*	5 0 0	—		Fully pd.
10000	Virneberg, c Rheinbreitbach, Germany* (£2 shares)	1 15 0	—		Jan. 1878
15000	Yorke Peninsula, c, South Australia	1 0 0	½	¼ ¼	Fully pd.
10000	Yorke Peninsula, c, South Australia Preference	1 0 0	1⅛	⅞ 1⅛	Fully pd.

§ Have made calls since last dividend was paid.

FOREIGN AND MISCELLANEOUS STOCKS, BONDS, LOANS, AND TRUSTS.

	Closing Prices	
Argentine, 1868 6 per cent.	75	76
Bolivia, 6 per cent.	25½	26½
Brazilian, 1865, 5 per cent.	92	94
Chilian, 1866, 7 per cent.	95	98
City of Providence, 5 p.c. coupon bnds	101	103
Egyptian, Gov preference	71¼	71¾
Do., unified debt, scrip	50¾	51¼
Do., 7 per cent., V.M.L.	77	79
Do., per cent. guar.	83	85
Do., K. Daira Sanieh	49½	50½

	Closing Prices.	
Foreign and Col. Gov. Trust, 6 p. ct.	75	80
Do., 5 per cent., 2d issue	65	70
Do., 6 per cent., 3d issue	63	68
Do., 1872, 4th issue	63	68
Do., 1873, 5th issue	58	62
Peruvian, 1870, 6 per cent.	14¾	15¼
Do., 1872, 5 per cent	12¾	13¼
Russian, 5½ per cent. L. Mort.	—	
Spanish, Quicksilver Mort., 5 p. ct.	97	99
United States Mort. 6 per cent.	99	101

NON-DIVIDEND MINES.

Shares.	Mines.	Paid.	Last wk.	Clos. pr
40000	Aberdaunant, l, Llanidloes*	1 0 0	⅜	¾ ⅞
2560	Aberllyn,* l, bl, Carnarvon	10 0 0	12	10 11
10000	Aberystwith,* s-l, Cardigan	5 0 0	—	
80	Albion, i, Cornwall	100 0 0	—	
7800	Alvig. & Burng.,* t, St. Aust.	3 0 0	1¾	1½ 1¾
12000	Assheton, l, Carnarvonshire*	5 0 0	1	¾ 1
50000	Ballycummisk,* c, Schull	2 0 0	—	
12000	Bedford United,* c, Tavist. (1l. liab.)	0 1 0	¼	⅛ ¼
30000	Bettws-y-Coed,* l (20,000 issued)	1 0 0	1¼	1 1¼
8000	Blaen Caelan,* l, Cardigan	8 0 0	4¾	4½ 4¾
3937	Blue Hills, t, c, St. Agnes	3 16 6	½	½ ¾
30000	Bodidris,* l, bl, Denbighshire	1 0 0	1⅜	1¼ 1⅜
1000	Bollihope Vale,* s-l, Durham	5 0 0	—	
200	Botallack, t, c, St. Just‡	123 15 0	—	
2000	Bowden Hill,* mn	1 0 0	—	
6000	Bradwell Moss Rake	1 0 0	1	¾ 1
256	Browngelly, c, St. Neot	2 0 0	2⅛	2¼ 2½
50000	Cambrian,* s-l, c, Cardiganshire	2 0 0	3½	3¼ 3½
3348	Cargoll, s-l, Newlyn‡	7 4 0	½	¼ ½
20000	Central Foxdale, l, I. of Man* (2l. sh.)	1 5 0	—	
10000	Central Van,* l, bl, Llanidloes	5 0 0	—	
5120	Clementina, l, Llanrwst*	1 0 0	1¾	1¼ 1¾
7500	Combellack,* t, Wendron	2 0 0	—	
6000	Combmartin, s-l, North Devon	0 7 0	⅛	⅛
24000	Court Grange, s-l, Cardiganshire	1 0 0	1⅛	1 1⅛
15000	Cwm Dwyfor,* c, s-l, Wales	1 0 0	—	
5000	Ditto, 12½ per cent. pref.	1 0 0	—	
3000	Cwmystwith (New) [5l. shares]	4 0 0	—	
1780	D'Eresby Cons., l, bl, Carnarvon	10 0 0	10½	10 11
512	D'Eresby Mountain, l, bl, Llanrwst	20 0 0	85	80 85
20000	Denbighshire Consolidated, l*	3 0 0	1½	1 1½
12000	Derwent,* l, Durham	4 0 0	2	1½ 2
10000	Dubby Syke, l, Durham*	0 15 0	½	½
6144	East Caradon, c, St. Cleer‡	2 19 0	⅛	¼ ½
4000	East Chiverton, l, Perranzabuloe	7 1 0	3	2½ 3
3000	East Craven Moor*, l, Pateley Bdge	10 0 0	9	8 9
6000	East Goginan, l, Cardigan	2 0 0	—	
18000	East Van, l, Llanidloes*	5 0 0	4½	4¼ 4¾
1722	East Wh. Lovell, t, Helston	9 1 0	½	¼ ½
20000	Elgar,* s-l, Cardiganshire	1 0 0	⅝	⅜ ⅝
8000	Fronvellan, l, Mont.* [4000 sh. fy. pd.]	1 0 0	—	
3950	Gawton, c, Tavistock	4 5 6	⅜	⅛ ⅜
12000	Glan Clwyd,* l, Gwyddelwern	1 0 0	—	
14000	Glenroy,* s-l, Isle of Man	4 5 0	¾	⅝ ¾
10000	Glyn,* l, Llanidloes	2 0 0	¾	½ ¾
12000	Goginan, & Level Newydd, Card., l	2 10 0	—	
100000	Gold, g, Merionethshire	1 0 0	—	
20000	Goreu,* s-l, Carmarthen	1 0 0	1	¾ 1
20000	Gt. E. Foxdale, l, I. of Man (1l. sh)	0 18 0	—	
12000	Great Holway,* l, Flintshire	5 0 0	5¼	4¾ 5¼
9500	Great Pant-y-Pydew, l, Holywell	2 0 0	—	
6000	Gt. Wheal Eleanor, t, North Bovey	1 17 6	2	1¾ 2
6000	Great Wheal Rodd,* s-l, Cornwall	0 10 0	1	¾ 1
10000	Harehope Gill,* l, Durham (£1 sh.)	0 5 0	—	
600	Hartington Moor,* carb. l, Derby	1 0 0	2	1½ 2
6400	Harwood,* l, Durham	0 15 0	5s.	4s. 5s.
1024	Herodsfoot, l, near Liskeard†	8 10 0	4½	4 4½
18000	Hingston Down, c, Calstock*†	0 6 0	⅛	¼ ⅛
5000	Hush Eisteddfod Minera,* l	2 0 0	—	
200	Islay,* l, Scotland	28 0 0	—	
2500	Killaloe, sl, Tipperary‡	1 0 0	—	
5000	Killifreth, t, Chacewater	2 3 6	¾	⅝ ¾
25000	Kingston Con., s-l, Stoke Climsland	1 0 0	—	
	Ditto, preference	1 0 0	1⅛	1 1⅛
12000	Ladywell,* l, Salop	2 10 0	1	¾ 1
12000	Ditto, 10 per cent. pref., 1l. each	0 10 0	⅝	½ ⅝
2500	Levant, c, t, St. Just	9 18 6	—	
6000	Livingstone Consols, t, St. Agnes	0 10 0	1	¾ 1
5120	Lovell, t, Wendron	0 16 0	2	1½ 2
25000	Llanrhaiadr, l, Montgomery*	2 0 0	—	
30000	Llanrwst,* l, Carnarvon	2 0 0	4	3¾ 4
24	Mawston,* l, South Wales	50 0 0	60	55 65
6000	Medlyn Moor, t, Wendron	2 9 10	—	
[illegible]	[illegible], l, Cardigan*	[illegible]	1¼	¾ 1¼
7000	Mid Devon Copper*	0 6 8	1¼	1 1¼
21000	Ditto	0 2 6	1	¾ 1
8000	Mineral Corp. of Great Britain*	10 0 0	11	10 11
11000	Monydd Gorddu, l, Cardigan* (Red.)	5 0 0	3¼	3½ 5
12000	Morfa Du, z, g, s, Anglesea	0 12 6	¾	⅝ ¾
25000	Nant-y-Ronen, s-l, Cardigan*	1 0 0	—	
15000	Nascent Copper*	1 0 0	—	
4768	New Bronfloyd,* l, Cardigan (5l. sh.)	3 16 0	4½	4⅜ 4½
8000	New Dolcoath, t, c, Camborne*	3 0 0	1¾	1½ 1¾
20000	New East Foxdale, s-l, Isle of Man	0 15 0	—	
18000	New Fowey Consols, t, St. Blazey*	3 0 0	2	1½ 2
1492	New Hendra, t, Breage	3 9 0	—	
3200	New South Merllyn, l, Flint*	2 10 0	1	½ 1
3500	New Tincroft,* t, Lelant	0 0	3	2½ 3
5000	New Wheal Emma, c, Buckfastleigh	2 0 0	—	
4000	North Cornwall,* l, Cornwall	5 0 0	5¾	5½ 5¾
30000	North Laxey,* Isle of Man	1 0 0	4s.	2s. 4s.
2000	North Levant, t, c, St. Just‡	12 8 0	1	¾ 1
20000	North Prince Patrick,* l, Holywell	1 0 0	—	
5936	North Treskerby, c, St. Agnes	5 17 10	—	
2000	North Wheal Towan, t, c, Illogan	1 19 6	—	
6400	Oola Hills,* s-l, Limerick	5 0 0	—	
12000	Pandora,* l, Carnarvon	2 0 0	¾	⅝ ¾
6000	Park Valley,* s-l, North Devon	0 4 0	1	¾ 1
6000	Parracombe, s-l, Devon	0 5 0	⅜	¼ ⅜
16923	Parys Mountain,* c, Anglesea	3 0 0	½	⅜ ½
12000	Phœnix, & W. Phœnix, t, c, Link.§	5 7 3	5	4½ 5
4000	Pateley Bridge, l, Yorkshire	5 0 0	2¼	1¾ 2¼
7000	Picton,* s-l, Holywell, fully paid	1 0 0	5	4 5
12000	Plynlimmon, l, Llanidloes*	2 0 0	6s.	4s. 6s.
10000	Port Nigel,* s-l, Carnarvonshire	2 0 0	½	¼ ½
2000	Prideaux Wood, t, Llanivery	5 0 0	—	
5182	Prince of Wales, c, Calstock‡	2 6 0	2s.	1s. 2s.
6000	Relistian Consols, c, Gwinear	0 10 0	⅝	½ ⅝
15000	Rookhope, l, Durham*	1 10 0	¾	¾ ⅞
5000	Silvercross,* c, t, Marazion	1 0 0	—	
4200	Snowbrook, s-l, Montgomery	5 0 0	—	
000	So. Cwmystwith, l, Cardiganshire	2 0 0	3½	2 3
4000	South Darren, l, Cardigan*	1 10 0	2¼	2 2¼
30000	South de Eresby Mountain, l	1 0 0	2	1⅜ 1⅝
512	South Dolcoath, c, t, Redruth	12 5 0	1⅛	1 1⅛
5000	So. Molton Cons., s-l, No. Devon	0 3 6	1	¾ 1
18000	South Roman Gravels, l*	1 10 0	⅝	⅛ ¼
6000	South Roskear, t, c, Camborne	7 5 0	—	
6000	South Tolcarne, t, c, Camborne	2 15 6	¾	½ ¾
937	South Wheal Crofty, c, Illogan	40 0 10	7	6 7
4500	South Wh. Frances, c, Illogan†	7 12 4	4¼	3¾ 4¼
6000	St. Lawrence, Amal., l, Flintshire*	2 0 0	—	
10000	St. Patrick, l, Halkin, Holywell*	1 0 0	1¼	1 1¼
6000	Success, &c., l, Derb. (12,000l. called)	1 0 0	—	
16000	Sunnyside,* l, Durham	2 0 0	2⅛	2 2⅜
30000	Talybont, s-l, Cardiganshire	1 0 0	1¼	1 1¼
6400	Teesdale,* l, Durham	1 0 0	½	⅜ ½
14000	Teign Valley, l, bar., Bridford	1 0 0	—	
10000	Temple, l, Cardigan*	1 0 0	6¼	5¾ 6¼
10000	Tolgus Consols,* c, Redruth	5 0 0	4½	3½ 4
5000	Treleigh Wood, t, Redruth	6 1 0	—	
12000	Trethellan, s-l, Crantock*	2 0 0	—	
640	Truro*, l, Nerquis, Flintshire	10 0 0	—	
10000	Tyn-y-Fron,* l, Cardigan	1 0 0	1¾	1⅜ 1⅝
20000	Van Consols, l, Llanidloes*	2 10 0	⅝	⅜ ⅝
1000	Vaughan*, l., Cardiganshire	10 0 0	—	
18000	Victor,* l, Flintshire (£1 share)	0 5 0	—	
12000	West Assheton, l, Carnarvon	1 0 0	1⅝	1⅜ 1⅝
6000	West Basset, c, Illogan†‡	6 13 4	⅞	⅝ ⅞
5500	West Combmartin, s-l, North Devon	1 0 0	—	
7000	Ditto	0 2 6	—	
3000	W. Craven Moor, l, Pateley Bridge*	10 0 0	10	9 10
5000	West Godolphin, t, c, Breage	2 16 0	1¼	1 1¼
12000	West Goginan,* Cardiganshire	2 0 0	1¼	¾ 1¼
10000	West Llangynog, s-l, Montgomery	2 0 0	—	
3000	West Mary Ann, l, Menheniot	0 3 6	¼	⅛ ¼
50000	West Milwr, s-l, Flint	1 0 0	—	
5000	West of England Granite Company	2 0 0	2	2
20000	West Pateley Bridge, l, Yorkshire	1 0 0	2⅛	2 2⅛
1000	West Roskear, t, s-l, bl, c, Camborne	2 0 0	17	
12000	West Tankerville,* l, Salop	3 0 0	⅜	¼ ⅜
3000	Ditto, 15 per cent pref.	3 0 0	—	
3000	West Wheal Peevor, t, Redruth	0 10 0	6½	6 6½
6000	Wheal Agar, c, Illogan	12 0 0	4¼	3¾ 4
512	Wheal Basset, c, Illogan‡	28 2 6	6	5 6
6000	Wheal Coates, t, St. Agnes	2 0 0	—	
2635	Wheal Comfort, c, Gwennap	1 7 0	—	
6000	Wheal Crebor, c, Tavistock	4 3 0	¾	½ ¾
5179	Wheal Grenville, c, Camborne*	3 16 6	2⅛	1¾ 2
12000	Wh. Mary Hutchings,* t, Plympton‡	1 18 6	3	2½ 3
12000	Wheal Russell, c, Tavistock	2 1 6	—	
4096	Wheal Uny, t, c, Redruth	14 0 6	1¾	⅞ 1
2324	White Cliff,* l, Llanrwst	5 0 0	—	
25000	Wicklow, c, sul, i, Wicklow	2 10 0	—	

b, blende; cl, coal; c, copper; g, gold; l, lead; s, silver; sl, slate; s-l, silver-lead; t, tin; z, zinc.

* Limited Liability Companies; † quoted on the Stock Exchange; ‡ have paid dividends.

IRON AND COAL COMPANIES.

Shares.	Company.	Paid.		Price.	
£100	Abbot, John, and Co. [L.]	£75 0 0	17	16	dis.
15	Albion Steel and Wire Co. [L.]	14 0 0		—	
5	Alltami Colliery Co. [L.]	5 0 0	3¼	3½	
100	Ashbury Co. [L.]	90 0 0	55	45	dis.
10	Bagnall, John, and Sons [L.]	10 0 0	1	1½	
10	Benhar Coal Co. [L.]	10 0 0	5¼	5¾	
50	Bilbao Iron Ore Co. [L.]	50 0 0	27	28	
10	Bilson & Crump Meadow Coll. Co. [L.]	10 0 0	4½	5	
4	Blaen Cwmbach Coal Co. [L.]	4 0 0			
50	Blaenavon Iron and Steel Co. [L.]	50 0 0		—	
100	Bolckow, Vaughan, and Co. [L.] A	50 0 0		—	
50	Bowling Iron Co. [L.]	50 0 0	4	6	pm.
50	Britannia Ironworks [L.]	25 0 0		—	
50	Brown, Bailey, and Dixon [L.]	40 0 0	10	9	dis.
100	Brown, John, and Co. [L.]	70 0 0	11½	11	dis
5	Cakemore Colliery Co. [L.]	5 0 0	5¼	5½	
100	Cammell and Co. [L.]	80 0 0	9	8½	dis.
20	Cannock and Huntington Coal [L.]	10 0 0	9	8½	dis.
10	Cardiff & Swansea St. Coal Co. [L.]	9 0 0	½	¾	
10	Cardigan Steel and Wire Co. [L.]	8 10 0		—	
10	Central Swedish Iron and Steel [L.]	10 0 0	1	2	
5	Chapel House Colliery	5 0 0	3	3¼	
50	Charlton Iron Co. [L.]	50 0 0	8	10	
50	Chatterley Iron Co. [L.]	45 0 0	35	33½	dis.
10	Chillington Iron Co. [L.]	10 0 0	2	2¼	
10	Consett Iron Co. [L.]	7 10 0	10½	11	pm.
1	Consett Spanish Ore [L.]	1 0 0	¼	½	dis.
50	Cooke, William, and Co. [L.]	40 0 0	32	30	dis.
20	Darlington Iron Co. [L.]	12 10 0	½	¾	
50	Davy Brothers [L.]	22 10 0	1	2	pm.
5	Diamond Fuel Co. [L.]	5 0 0		—	
23	Ebbw Vale Co. [L.]	20 0 0	12	11	dis.
100	Fox, Samuel, and Co. [L.]	80 0 0	30	31	
10	General Mining Ass. [L.] (£1 returned)	9 0 0	2½	3½	
20	Great Western Coal Co. [L.]	17 0 0		—	
2	Gwyngwillim Colliery Co. [L.]	2 0 0		—	
15	Hopkins, Gilkes, and Co. [L.]	11 0 0	10	9	dis.
50	Knowles, Andrew, and Sons [L.]	17 0 0	3¼	3	dis.
10	Llay Hall Coal, Iron, & Firebrick [L.]	10 0 0	3	1	dis.
5	Littledean Woodside Coll. Co. [L.]	5 0 0		—	
50	Llynvi, Ogmore, & Tondu Co. [L.]	50 0 0	5	5½	
10	Lydney and Wigpool Iron Ore [L.]	8 5 0	11	10	dis.
10	Marbella Iron Ore Co. [L.]	10 0 0	7½	7	dis.
6	Mersey Steel and Iron Co. [L.]	5 0 0		—	
10	Midland Iron Co. [L.]	5 0 0	1½	1	dis
5	Mold Argoed Colliery Co. [L.]	5 0 0	3	2¼	dis.
10	Monkland Iron and Coal Co. [L.]	10 0 0	7½	7	dis.
4	Mwyndy Iron Ore [L.]	3 10 0	2¼	2	dis.
100	Nant-y-Glo and Blaina (8 p. c. pref.)	100 0 0	17	20	
3	Nerbudda Coal and Iron [L. & Red.]	2 0 0	1	1¼	pm
20	New Sharlston Collieries [L.] Pref.	20 0 0	18	16	dis
10	Newport Abercarn Coal Co. [L.]	10 0 0	2¼	2½	
10	Northmptn. Coal, Iron & Wagon [L.]	8 0 0		—	
10	Northfield Iron Co. [L.]	8 10 0	⅜	7¼	dis.
1	Norton Green Coal Co. [L.]	1 0 0		—	
35	Palmer's Shipbuilding and Iron [L.]	25 0 0	15½	15	dis.
100	Parkgate Iron Co. [L.]	55 0 0	15	13	dis.
20	Patent Nut and Bolt Co. [L.]	14 0 0		7½	pm.
20	Patent Shaft and Axletree [L.]	10 0 0	1	¾	dis.
20	Pelsall Coal and Iron [L.]	17 10 0	14	13	dis.
50	Phœnix Bessemer Co. [L.]	40 0 0		—	
50	Rhymney Iron Co. [L.]	50 0 0	16	16½	
10	Richards and Co. [L.]	10 0 0		—	
10	Sandwell Park Colliery Co. [L.]	10 0 0	14½	14½	
10	Ditto New	5 0 0	2	2½	pm.
100	Shotts Iron Co. [L.]	100 0 0	90	92	
100	Sheepbridge Iron and Coal [L.]	55 0 0	15	14	dis
50	Silkstone & Dodworth Cl. & Iron [L.]	33 0 0	24	23	dis.
20	Skerne Ironworks [L.]	20 0 0	15	14½	dis
50	Somorrostro Iron Co. [L.]	50 0 0		—	
25	South Wales Coal Co. [L.]	21 0 0	6½	7½	
100	Staveley Iron and Coal Co. [L.]	60 0 0	13	14	pm.
100	Ditto ditto New	10 0 0	2¼	3¼	pm.
10	Swansea Valley Steam Coll. Co. [L.]	6 0 0			
100	Thames Iron Company	100 0 0		—	
50	Tredegar Iron and Coal Co. [L.]	20 0 0	11	10	dis
25	Ditto B. shares	25 0 0	21	22	
20	Ulverston Mining Co. [L.]	12 0 0	5	3	dis.
10	Vancouver Coal [L.]	6 0 0	1½	1¼	dis.
100	Vickers, Sons, & Co. [L.]	100 0 0	30	35	pm.
50	Welsh Ironworks Co. [L.]	50 0 0		—	
25	W. Cumberland I. and Steel [L.]	20 0 0	12½	12	dis
10	West Mostyn Coal [L.] (12 p.c. pref.)	5 0 0		—	
5	West Swansea Colliery Co. [L.]	5 0 0		—	
10	Whitehaven Iron Co. [L.]	10 0 0		—	
100	Wigan and Whiston Coal Co. [L.]	70 0 0		—	
100	Wigan Coal and Iron Co. [L.]	75 0 0		—	

WAGON COMPANIES.

10	Birmingham Wagon Co. [L.]	10 0 0	16½	16½	
10	Ditto, 2nd issue	4 0 0	1⅞	2⅛	pm.
10	Ditto, pref., 6 per cent.	10 0 0	11¾	12	
20	British Wagon Co. [L.]	10 0 0	1½	1½	pm.
10	Gloucester [L.]	10 0 0	8	8¼	
10	Ditto, 5th issue	5 0 0	1¾	1¼	dis
10	Met. Rail. Car. and Wagon Co. [L.]	5 0 0	3⅜	3⅜	pm
5	Ditto, pref., 6 per cent.	2 0 0	½	½	pm.
10	Midland	10 0 0	5¾	6	pm.
20	North Central Wagon Co.	20 0 0	22	23	
5	Rail. Car. [L.] (Oldbury)	5 0 0	4¼	4½	
5	Ditto, pref., 6 per cent.	5 0 0	4⅞	5⅛	
20	Sheffield Wagon Co. [L.]	15 0 0	1½	2	pm.
10	Yorkshire Wagon Co. [L.]	10 0 0	3⅜	4	pm.

TELEGRAPH COMPANIES.

"St."	Anglo-American	100 0 0	61¼	61¾
10	Brazilian Submarine	10 0 0	6¾	7
20	Direct United States Cable	20 0 0	13⅜	13⅞
10	Eastern	10 0 0	7⅝	7⅞
10	East. Exten., Australia and China	10 0 0	7¾	7⅞
10	Great Northern	10 0 0	8⅜	8⅝
25	Indo-European	25 0 0	20	21
10	Mediterranean Extension	10 0 0	3	3½
8	Reuters	8 0 0	10	11
Stk.	Submarine	100 0 0	228	233
10	West India and Panama	10 0 0	2¼	2½
20	Western and Brazilian	20 0 0	4½	4¾
$1000	Western Union, 7 per cent. Mort. Bonds	$1000	114	118

MISCELLANEOUS.

Stk.	Atlantic and Great Western Leased Lines, Rental Trust	100 0 0	43	48	
25	Australian Agricultural	21 10 0	81	83	
25	Austral. Mort. Land and Finance [L.]	5 0 0	6¼	6¾	pm
10	Avonside Engine [L.]	7 0 0	5	3	dis
Stk.	Baltimore and Ohio, 6 per cent.	100 0 0	107	109	
10	Brighton Aquarium [L.]	10 0 0	9	10	
Stk.	Cent. of New Jersey Con. Mort.	100 0 0	88	90	
Stk.	Cent. Pacific of Calif., 1st Mort. 6 p.c.	100 0 0	108	109	
25	City of London Real Property [L.]	12 0 0	1¾	2¼	pm
5	Diamond Rock Boring	4 10 0	3½	3¼	dis.
15	English and Foreign Credit	8 0 0		—	
16	Fore Street Warehouse [L.]	14 0 0	11	12	pm
15	Foster, Porter, and Co. [L.]	10 10 0	21	22	
5	Gen. Phos. & Chem. Works Co. [L.]	5 0 0		—	
1	Greenhill [L.]	1 0 0		—	
5	Kit Hill Tunnel [L.]	1 0 0			
17	Hudson's Bay Company	17 0 0	11¼	11¾	
10	Huntington Copper and Sul. Co.	9 0 0	8¼	7¾	dis
Stk.	Illinois Central, $100 shares	100 0 0	85½	86½	
Stk.	Illinois & St. Louis Bridge, 1st Mort.	100 0 0	80	85	
Stk.	Ditto, 2nd Mort., 7 per cent.	100 0 0	32	37	
Stk.	Illinois Cent. Sinking Fund, 5 p. cent.	100 0 0	100	102	
Stk.	Ditto, 6 per cent.	100 0 0	109	111	
7½	Imperial Credit [L.]	7 10 0	7⅜	7⅝	
—	Ditto, Surplus Certificate	—	7¼	7⅝	
Stk.	Lehigh Val. Con. Mort., A, 6 p. cent.	100 0 0	101	103	
10	Milner's Safe [L.]	10 0 0	9	10	
25	National Discount [L.]	5 0 0	10½	11	
Stk.	N. Cent. Rail. Con. Mort., 6 per cent.	10 0 0	85	87	
10	Pawson and Co. [L.]	8 0 0	¾	1¼	pm
50	Peninsular and Oriental Steam	50 0 0	40	42	
Stk.	Pennsyl. Gen. Mort. 6 p. cent., 1910.	100 0 0	107½	108½	
Stk.	Ditto, Con. Sink. Fund, 6 p. ct., 1905	100 0 0	96	97	
Stk.	Scottish Aust. Investment Company.	100 0 0	199	204	
Stk.	Ditto, 6 per cent. Preference	100 0 0	122	127	
10	Silber Light (ord. sh.)	10 0 0		—	
20	Suez Canal shares	20 0 0			
12	Telegraph Construc. & Mainte. [L.]	12 0 0	30¾	31¼	
5	Ditto, Second Bonus Three per Cents	5 0 0	2¾	3	
10	Tharsis Sulphur and Copper Co.	10 0 0	23⅛	24½	
Stk.	Union Pacific Land Grant, 1st Mort.	100 0 0	108	110	
Stk.	Union Pacific Railway, 1st Mort.	100 0 0	107	109	

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